Chapter 8

Breakdown of the Partnership

“Wind Down” of ZTAT microprocessor

The development of the ZTAT microprocessor was started in 1983 and it was completed in 1985. The production was launched, and the strong sales promotion activities started both in domestic market and abroad. Various problems such as yield enhancement were all cleared, and the production volume reached 240,000 in August, 1986. It contributed to the Division’s sales increase at an unprecedented speed. It became a “star of hope” not only for the microprocessor department but also for the whole Hitachi semiconductor, and its bright future was strongly anticipated.

However, the relation between Hitachi and Motorola developed into a situation which would be called later “Wind Down case”, and the partnership of two companies broke apart. I would like to look back on this matter.

As I mentioned in the previous chapter, the conflict of the CMOS 16-bit microprocessor (63K) was finally solved, and official market introduction was made in September 1985. The discussion on the ZTAT micro microprocessor started immediately after the close of this long negotiated “CMOS authorization problem”. Six engineers including Owen Williams (negotiation window) visited Hitachi on the 24th of the same month, and a meeting on the technology transfer was held from 10 am until dinner. It was a concrete discussion including practical members on how to proceed with the cooperation on ZTAT micro microprocessor.

Recently, I could find a note of my welcome speech at the beginning of this meeting. The main message was, “We want to promote the ZTAT micro microprocessor together and to build a Win-Win relationship”. In order to express in simple and clear way how important ZTAT was, I concluded with the following phrase which I introduced earlier.

“Someday, all microprocessors will be made this way: ZTAT”.

Although it expressed the future of ZTAT rather drastically, I think that it was duly accepted by engineers who had good understanding of microprocessor. After that, the concrete method of technology transfer was discussed. Since we expected that the ZTAT acceptance in the market would be accelerated by the joint promotion of Hitachi and Motorola, we promised the best support to them. Their side well understood the high potential of ZTAT, and they expressed their intention to move actively to the commercialization of the products, and the dinner in that evening became lively in a good atmosphere.

However, the actual situation which followed did not progress as expected. In order to explain the background, it is necessary to touch on the situation of the patent contract between the two.

At this time, negotiations on the contract renewal of semiconductor patents were underway in parallel with the consultation on the ZTAT microprocessor. In the case of normal patent negotiations, it is usual to argue the balance of compensation after evaluating the whole set of semiconductor patents from the both sides. However, in the case of Motorola, it had been decided to deal with microprocessors in a separate framework from other devices. First, the microprocessors are

classified as MFP (Motorola Family Product) which was a group of Motorola architecture products, separated from other product with different architecture. All the microprocessors of the Motorola architecture were classified as MFP, even if the process and the device technologies were different. For example, 4-bit micro microprocessors developed independently by Hitachi were not included in MFP, but 6801, 6301, 63K (68HC000), 63701X (ZTAT), etc. were all classified as MFP. For MFP, they further classified them to the second sourced products and non-second sourced products, where they licensed patents only to the second source products. And the terms and conditions on the second source were to be separately treated from patent negotiations as business negotiations. In the above example, it was already decided that they would do second source for 6301 and 63K (68HC000), but ZTAT's second source was still a pending matter.

The meeting above on September 24, 1985 in Tokyo was the start of this ZTAT second source negotiations. Starting with this meeting, patent negotiations and the ZTAT microprocessor negotiations were continued in parallel. In patent negotiations, the assessment of mutual patent positions was conducted, their values were calculated, and compromising points were searched. In the ZTAT negotiations, it was the main agenda which product and under what condition we would proceed with the second source.

The patent negotiations were held for four days from January 12, 1986. The place was the head office of Motorola semiconductor in Phoenix. The climate was mild even in January.

The patent groups were led by Gillman from their side, and from Hitachi side, Matsuda (Overseas Dept.) and Ogawa (IP Dept.) of headquarters and Hatsukano (Microprocessor Marketing) and I participated in the negotiation. Although it was a hard negotiation, we finally reached an agreement after the final negotiation on the fourth day.

Photo 8.1 is a picture of a "green meeting" to discuss the negotiation strategy among Hitachi members. Photo 8.2 is a picture of negotiating representatives of both sides after finishing the provisional sign.

Photo 8.1 Patent negotiating members of Hitachi (Ogawa, Matsuda, Hatsukano, and the author from the left). January 1986, in Phoenix

Photo 8.2 Picture after finishing provisional agreement of patent negotiations (Matsuda, Makimoto, Gilman, and Saari from the left)

The “Wind Down case”

The patent negotiation had been settled, and the remaining issue was only the matter of the second source of the ZTAT microprocessor.

I was promoted to the GM of Musashi Works on February 21, 1986, right after the settlement of the patent negotiation. The semiconductor industry was in a major depression at this time and the US-Japan semiconductor friction was burning. Looking it back today, the promotion was in the worst timing. However, even in such a major recession, Hitachi’s ZTAT microprocessor was very popular in the market, and the request for increased production continued from the domestic and overseas sales forces.

The business people of Motorola also knew well about the reputation of ZTAT, and there were strong voices in the company to commercialize it in an early timing. For example, Rick Yountz, the president of the Japanese branch office, was one of those. Naturally, he was well aware that the ZTAT microprocessor was doing very good fights even in this recession, and he expressed it as “ZTAT microprocessor is a dynamite device!” I was also very much impressed by his admiring expression. This expressed the strong power of ZTAT microprocessor in a very plain and direct manner. At this time, how to secure full line operation of the factories was a big challenge for semiconductor management. He probably hoped that they would be able to fill their Aizu factory by introducing the ZTAT microprocessor at an early timing, when it was suffering from insufficient factory operation.

However, the situation suddenly changed in May, 1986, after eight months from the September meeting on ZTAT in Tokyo. We received a sudden communication from Motorola that, “We cannot second source ZTAT microprocessor, due to the resource shortage.” And in June we received an even more surprising notice. That is, we received a letter from them, stating, “Since we cannot second source ZTAT microprocessor, we cannot license the patents to the product, either. We request Hitachi to “wind down” this product.”

“Wind Down” is an expression that we did not hear much, but by referring to a dictionary, we

learned that it meant “to pull down (a window) by winding a handle, or to finish (operations, business, etc.) gradually.” Flatly speaking, it was a request to finish the ZTAT business. It was too abrupt as a request to us, and the ZTAT microprocessor was the biggest selling item. It became really a huge problem for us.

Since the Tokyo meeting in September of the previous year their stance had been positive, and we thought that if “insufficient resources” was true at its face value, we should have some breakthrough to the problem by the cooperation of both companies.

I decided to discuss the matter with Murray Goldman in face-to-face. I flew to Austin, thinking that we should be able to find some solution by our frank discussions. Since we had solved the big problems twice in the past with him, once in the 6301 second sourcing issue, and the other in the 63K authorization issue, I had an expectation to get some solution this time, too.

We met on June 20, 1986, soon after we received the letter. In the meeting with Goldman, we confirmed the positions of both parties, and had literally unreserved talks as to “how we can possibly break the deadlock situation”. I emphasized the points that the market demand for ZTAT was extremely strong and that we would be able to establish an overwhelming position if we launch the product at this timing together. Also, I proposed a drastic plan of our support for their production launch. Goldman took it very positively, and he promised us to propose to the top management along this line. I knew his good faithful personality and execution power well, so I expected that his proposal to the top would open the way.

Time of collapse

There was no response from Motorola for the next three months. There was no knowing whether it was “no news means good news”, or that their internal discussion was running into difficulties. I assume that there were many internal exchanges over the proposal by Goldman to the top. Finally as the autumn deepened, there was a response from their public relations group. It was that, “The top decision was that Motorola cannot cooperate with Hitachi regarding ZTAT microprocessor. The practical level negotiation cannot break this situation, and the only possibility lies on direct talks between the tops of both companies.” The situation became extremely difficult, and the only hope was some possible good breakthrough by the top meeting.

From Hitachi side, I asked Sutezo Hata, Senior Executive Director who oversaw the electronics group, for the meeting. He was in the position which was three steps above me, and he was a “commander-in-chief” to cover both semiconductor and display businesses. The top meeting took place on December 1st, 1986. President Mitchell and other executives from the semiconductor division attended from their side. From our side, Minoru Tsukada (Overseas Dept. of the headquarters) and I also accompanied Hata.

President Mitchell gave a polite greeting to Hata for taking the trouble to come and visit them, and he expressed appreciation for the cooperation of Hitachi. Hata, with a reply to the greeting, mentioned his wish for the frank discussions between the tops as to the reestablishment of cooperative relationship. As we expected the start of substantial talks, Mitchell started, saying, “Today’s top meeting was too late”, and told us that a comprehensive technical alliance had been agreed with Toshiba a little while before this.

It's all over!

The relationship of the microprocessor technology alliance with Motorola finished at this top meeting at the end of the year. As of this day, the relationship between the two companies collapsed. There was a despairing feel that blazed up in my mind. There is nothing we can do without our own proprietary architecture of microprocessor. However hard it might be, we must develop our own original architecture and put it in the market as soon as possible.

To follow up the result of the top meeting, we now started business level negotiations again, but the theme of the negotiations was the end of war processing, so to speak. That is "how to proceed with the wind down".

The year of 1986 with painful darkness ended. As soon as the new year started, the first meeting to discuss the wind down process was held at Hitachi headquarters. Gillman (patent officer) and Owen Williams (negotiation window) and others from their side, and from our side, Matsuda and Tsukada from the headquarters Overseas Dept., myself and Hatsukano who was in charge of microprocessor marketing attended.

The shipment of ZTAT microprocessors at this point was 60% to Japan and Asia, 24% to US and 16% to Europe. Since customers were spread all over the world, the wind down was a very difficult matter, and we were now to take on an extremely big problem.

The argument on Hitachi side was that we had to secure a scheme in which we could minimize the troubles at the existing customer sites, even though we would not sell to new customers. On the contrary, they argued that they would not allow new system design-ins even at the existing customers. After the arguments on various points, we concluded that we would bring back the issues on both sides and that we would conclude by the end of February.

However, at this point, an unexpected incident happened to me regarding my work position. I was dismissed from the GM of Musashi Works and was appointed as the GM of Takasaki Works as of February 21. The prospect of the business performance in the second half of 1986 was a large deficit, so I was dismissed from the GM in charge of profit responsibility.　At this time, in addition to the problem of the Japan-U.S. Semiconductor Agreement and a major depression due to the price erosion of memory, it was a position change while having the problem of ZTAT microprocessor wind down. It was the matter of the greatest regret for me. Especially for the ZTAT microprocessor, I took the lead by myself in the development, manufacturing and promotion for the market introduction. As a result, we received favorable acceptance from many customers, with many design wins to various products. And now we had to force these customers to change their product selection policy because of the product wind down, and all I could do was to apologize to them in my heart, and I gulped down my tears of regret.

Actual wind down activities were mainly carried out by Hatsukano, the Dept. Manager and his team on the side of business division with the cooperation of all domestic and overseas sales forces. It was a big damage to the microprocessor business of Hitachi, and it was also a severe trial for it. The thought of that regret can never go away even today.

At the same time, the wind down of the ZTAT microprocessor left with us a great lesson. It is that "In the business of microprocessor, we must develop the architecture of our own, and we must put it under our complete control." All of Hitachi's microprocessor engineers roused themselves with this strong feel.

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