Chapter VIII

Emergence of Destructive New Technologies

In this chapter, we discuss the emergence of alternative products. Under conditions of severe competition, companies launch alternative products to gain the initiative and to promote increased sales, although the R&D and manufacturing cause large cost increases. In the case of the VCR, many alternative products, such as EVR, TED, and the laser disk, have existed since the 1960s and were improved many times in attempts to beat VHS. However, VHS (a magnetic recording system) remained the de facto standard until the DVD and HDD recorders replaced the VHS around 2000. Here we explain the reasons why VHS products were able to become the de facto standard for a few decades and how the alternative products, DVD and HDD recorders, ultimately replaced the VHS.

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The life cycle of VHS, a de facto standard of the home-use VCR, is about three decades. Those of the automobile, the TV, the washing machine and the refrigerator are much longer. The demand for the automobile has continued with vigor for about a hundred years. However, that of the home-use VCR was very long considering the existence of alternative products, such as LD (Laser Disc), CD Video, and so on. The demand for the device which can record TV programs and play back prerecorded media would continue until we can access to the huge video storage through the Internet or cable TV at any time and for a reasonable price. Other factors of the longevity, except for the practicability of the product, were divided into two categories: the industry and market side.

From the industry side, the longer the life cycle, the better it is. The longer life cycle makes it easier for companies to recover the cost easily and earn a big cumulative profit. To enlarge the life cycle, the industry must control the diffusion rate and should exclude the alternative products. The home-use VCR market was a seller’s market for the first decade because the number of manufacturers was limited. Japanese companies almost monopolized the industry from the beginning to end. In addition to the limited number of the companies, the industry had a core, VHS format, on which the product development advanced orderly based. The market was not confused by other formats after VHS became de facto standard. Those companies did not want to bring out new alternative products by themselves while they had the enough and stable profit in the market, in which various types of companies had the enough space to earn their living.

From the market side, the short life cycle was not preferable because users bought machines and owned recorded cassettes, which were their property. They did not want their property to become obsolete quickly. Most products gradually come up in quality and decline in price as time passes, so that many users repeated the purchase a few times over the years. In addition, some users who were weak in the manipulation did not want to make the change to an alternative product. On the other hand, others did not want the long life cycle because they wished for a new product after the long doldrums in the product development.

The home-use VCR enjoyed the longevity. The practicality of video storage and playback machines continues. Although the alternative products attacked the home use VCR many times, it pushed them aside. The industry