

## **Betamax and VHS**

Revised: August 28, 2002

Sony's 1974 launch of its Betamax videotape recording system was a continuation of its record of technological leadership in consumer electronics. In the mid-1970s, however, a second competing standard for videocassette recorders (VCR) was being developed. The strategic issue facing Sony was how to deal with this threat to its own standard.

### **Competing Technologies**

Sony was aware that it might not be able to dictate an industry standard. Seven months before the launch of Betamax, Sony chairman Akio Morita showed his machine to executives from Matsushita, JVC, and RCA, in an effort to get support for Sony's design. Sony's attitude seemed to be: "We completed this one, why don't you simply follow us and become partners in producing VCRs that use our Betamax system."

Sony's apparent arrogant attitude did not go over well with potential partners. JVC replied that it preferred to develop its own technology. Konosuke Matsushita, in turn, was unhappy that he had not been consulted about the Betamax design. He, too, declined to participate in producing VCRs for the Betamax system.

Two years later, JVC introduced the Video Home System (VHS), an incompatible alternative to Betamax. Sony had a head start: When JVC introduced VHS in September 1976, more than 100,000 Betamax machines had already been sold. Several other systems also appeared briefly, but none generated much interest from consumers.

### **The VHS "Family"**

Initially, VHS had a longer recording time (2 hours, rather than 1) but lower picture quality. However, these technical differences were short-lived, and over the next few years the two standards leap-frogged each other repeatedly. Perhaps more important, JVC followed a more open policy for partners. Says Morita: "We didn't put enough effort into making a family. ... The other side, coming later, made a family." By 1984, while the Beta group numbered only a dozen firms, the VHS group included 40 companies, among them Grundig, Hitachi, Matsushita, Mitsubishi, Philips, RCA, and Sharp, some of the biggest manufacturers in Japan, Europe, and the US.

The "bandwagon" of supporting firms had two important effects. First, it gave the VHS standard greater credibility. Customers considering VHS might be reassured that the system had such broad support. Second, it induced a faster pace of product improvement at precisely the moment when the market was choosing between the two systems, as

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partners contributed to the design and manufacture of VHS devices. A slight technological advantage over Betamax in the late 1970s helped VHS gain market share. Larger scale also allowed some manufacturers – Matsushita, in particular – to reduce costs significantly. By 1978, VHS had caught up; see Exhibits 1 and 2.

### **And the Winner Is**

In 1980, the total installed base of VCRs worldwide was less than 10 million units; see Exhibit 1. Over the next decade, the market expanded to more than 200 million. To a large extent, this dramatic growth resulted from consumers' shift from watching shows they recorded themselves to prerecorded movies. The sale and rental of these movies gave a strong advantage to the installed base, as video stores stocked movies in the format most used by their customers, namely VHS. The existence of VHS movies then increased demand for VHS machines, and so on. As Fortune magazine put it in a 1985 article, "Betamax keeps falling farther behind. ... As consumers perceive Betamax faltering, they flock in even greater numbers to VHS, worried that those who produce movie cassettes for VCRs might desert Betamax."

In 1988, Sony began production of VHS recorders; the Betamax technology was used in camcorders for commercial use. JVC, on the other hand, won the standards war, but its open sharing of the VHS technology kept it from earning much on its investment.

### **Questions for Analysis**

- (a) What factors led to the dominance of VHS over Betamax in the VCR market?
- (b) Was there a "first-mover advantage"?
- (c) Did Sony "lose"? Did JVC "win"?
- (d) Can you think of other situations that are similar?

### **Additional Information Sources**

This case draws on information from a number of sources, including:

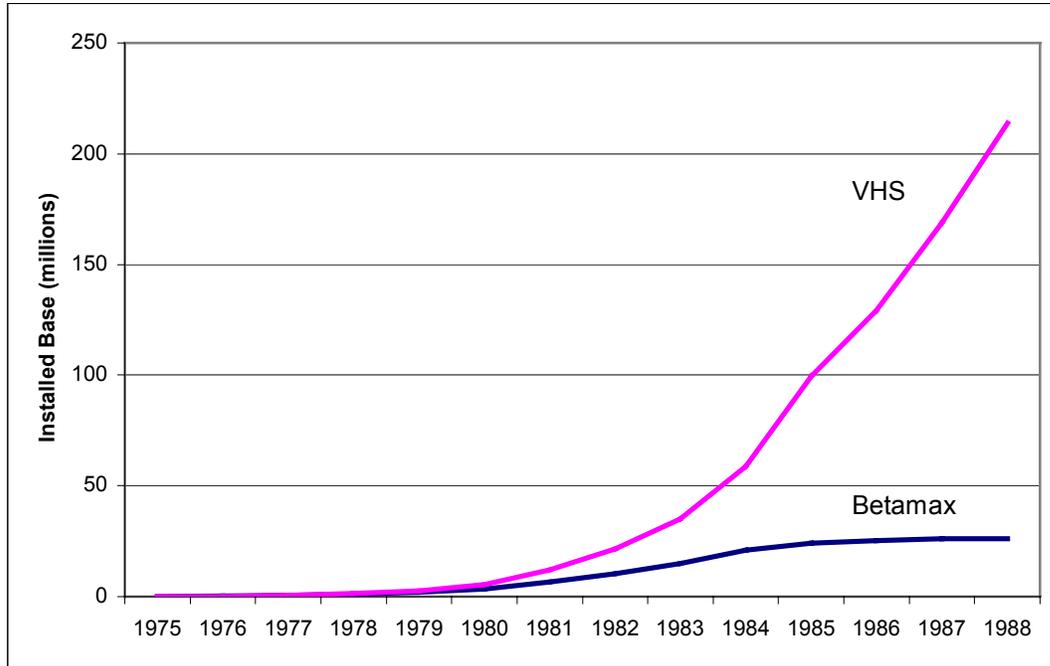
- Michael Cusumano, Yiorgos Mylonadis, and Richard Rosenbloom, "Strategic maneuvering and mass-market dynamic: The Triumph of VHS over Beta," *Business History Review*, 66 (1992), 51-94.
- Ranganath Nayak and John Ketterington, *Breakthroughs!*, New York: Rawson Associates, 1986, chapter 2.
- Lee Smith, "Sony battles back," *Fortune*, April 15, 1985.

### **Notes**

*This case was prepared by Luís Cabral and David Backus for the purpose of class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. © 2001 David Backus and Luís Cabral.*

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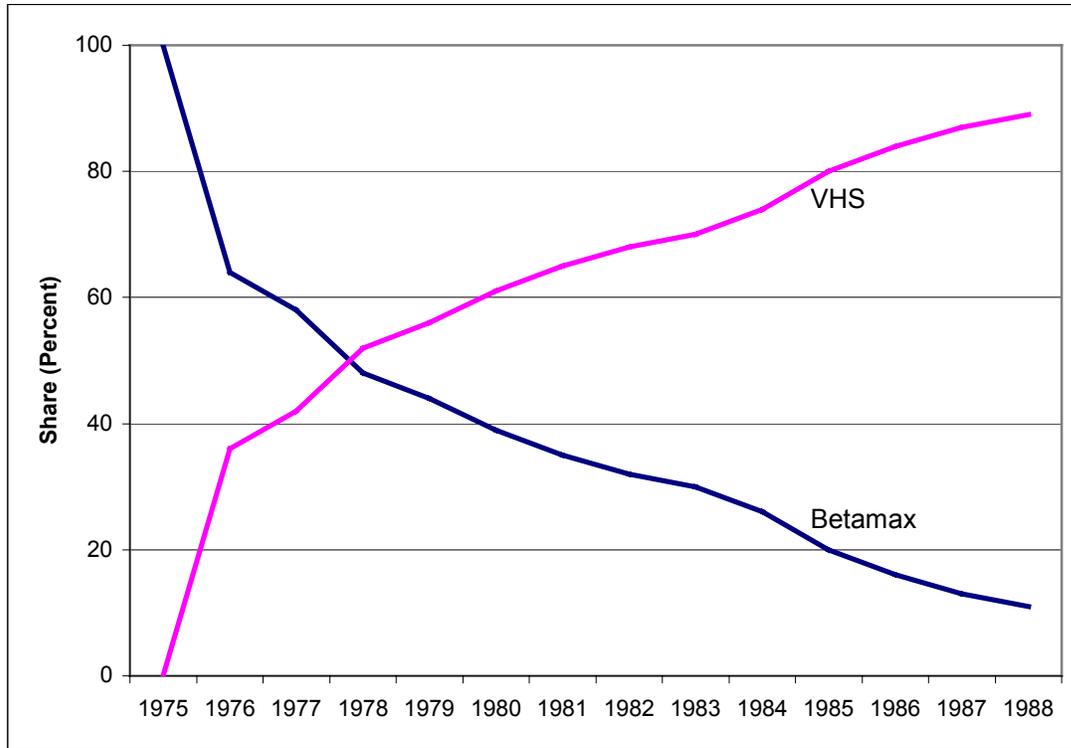
**Exhibit 1**  
**Cumulative Numbers of Units Sold**



Source: Based on data from Cusumano et al., Table 1.

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**Exhibit 2**  
**Share of VCR Market (VHS + Betamax)**



Source: Based on data from Cusumano et al., Table 1.