

The VCR Battle

Strategic Maneuvering and Mass-Market Dynamics: The Triumph of VHS over Beta

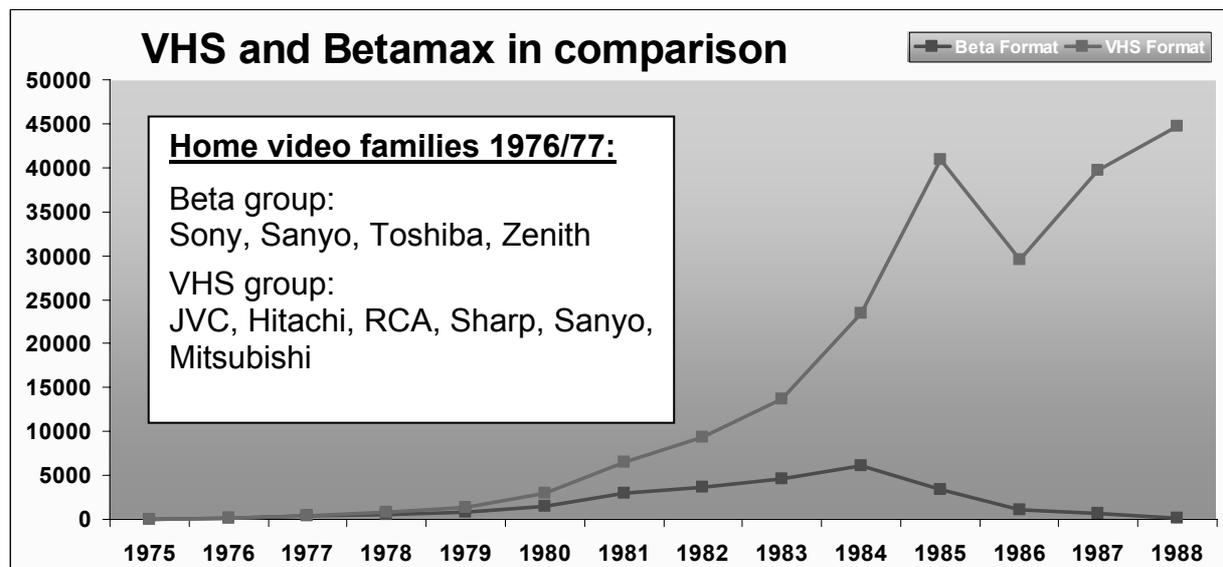
Case by written by Michael A. Cusumano, Yiorgos Mylonadis and Richard S. Rosenbloom

Management of Innovation and Technology WS02/03

Dennis Damer, Svenja Lassen and Stefan Broda

Chronology of events

- 1956 Invention of the Ampex VCR format for broadcasting applications by Ampex; very large and useless for households
- 1950's Further development of the Ampex machine by other companies: smaller size, lower price plus product and process innovations and still useless for households
- 1960's VCR market stagnating
- 1970 Cross-licensing agreement for video recording patents between Sony, Matsushita and JVC
- 1971 Introduction of the U-Matic format by Sony, JVC and Matsushita: replaced lots of other formats, but still mainly for professional and educational use; basis for VHS and Beta
- 1975 Sony introduced the Betamax: breakthrough on the VCR market
- 1976 Introduction of the VHS by JVC
- 1977 VHS enters European market
RCA adopts VHS standard
- 1978 All major European producers adopt VHS standard
- 1984 US partner Zenith drops Beta format; end of Betamax



Having had to compromise on the U-Matic design Sony was determined to go its own way in developing its new format (Betamax). When Sony approached JVC and Matsushita the development already in its final stages and Sony had already begun production preparations signalling an unwillingness to cooperate on standards. An initial disadvantage of the Betamax was its playing time of only one hour. Even though Sony later eventually introduced five-hour tapes it could not regain the market share lost to VHS (which offered two-hour tapes from the beginning).

From the beginning Sony's production facilities were unable to satisfy the market's

Bandwagon effect:

First described in 1950s by Harvey Leibenstein. Describes the phenomenon especially common in high-technology markets that as the number of users of a product grows, so does the demand for it. Consumers, producers and distributors will then support the product which seems most likely to dominate the market. Early sales and aggressive marketing strategies can help to create such a momentum. Even small advantages in the beginning can tip the balance in favour of one product.

demand.

Before adopting the Betamax standard many companies decided to wait for JVC's VHS format. JVC's parent company Matsushita possessed considerable skills in imitating and mass producing technology products. Matsushita was able to imitate most competitors' features and innovations between 6 months and a year.

The strategy of JVC and Matsushita was aimed at creating an alignment of producers and gaining market share. In contrast to Sony the two companies agreed to ship OEM VCRs to its licensees and them in the further development of the VHS system. This helped the two companies to gather numerous partner companies around them, whereas Sony's approach was seen by most as rude and uncooperative. This behaviour as well as being highly selective regarding its partners kept the Betamax production capacity low.

Producers of prerecorded tapes also favoured VHS as it was the brand adopted by the majority of the market and because of the assistance in production offered to them by JVC. The market for prerecorded tapes began to develop in the early 1980s.

Network Externality

Third party products which supply your product with additional functionality and therefore add value to it are called network externalities. In our example, it does not make a lot of sense to buy a VCR without having a TV and a tape. TV Channels whose programs you can record and pre-recorded tapes contribute additional value.

Additionally to what is stated in the case, Sony's refusal to license its Betamax technology to the blue movie industry is seen as the hidden hand behind VHS's victory (Smith 2000 and Kelly 1999). This becomes clearer when considering that by 1979 approximately 75% of all prerecorded tapes sold were X-rated (Ellis 1992). On the other hand, JVC turned out to be more cooperative to producers of prerecorded tapes.

Especially blue movies present a tremendously valuable *network externality* as, due to legislation in most countries, adult content is not available on TV.

Special Effects Comparison

	Beta	VHS
Wireless Remote	1977/3	1977/6
½ Speed	1977/3	1977/6
Slow/Still	1979/3	1977/12
Portable VCR	1978/9	1978/2
1/3 Speed	1979/3	1979/8
Scan/Slow/Still	1979/3	1979/8
Stereo recording	1980/7	1979/8
Hi-fi	1983/4	1983/5
One-unit camera-recorder	1983/7	1984/3

Recording-Playing Time

Year	Beta	VHS
1975/5	1 hr.	
1976/10		2 hr.
1977/3	2 hr.	
1977/10		4 hr.
1978/10	3 hr.	
1979/3	4,5 hr.	
1979/8		6 hr.
1982/3	8 hr.	

VCR Market share by Country and Format (1983)

	USA	Japan	Britain	W. Ger.	France	Italy	Above Totals
VHS	75	70	74	60	70	60	72
Beta	25	30	24	20	20	20	25
V-2000	0	0	2	20	10	20	3

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