REPORT ON HOME VIDEO

Department of Communications

Prepared by Norma Lennon

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TABLE OF CONTENTS

Page

INTRODUCTION

It may be that the eighties will be the age of the wired head. Exponential industry growth observed in the U.S. indicates that home video/demand media systems will burgeon here, as elsewhere, sometime down the road.

Arnold Rockman, Chairman of the Sociology Department at York University contends that television as we have experienced it so far is almost exactly analogous to the use of the Bible before the advent of Gutenberg and Luther, and (remember McLuhan?) the evolution of demand media has followed a path similar to the path of the printed book, but in forty years rather than six hundred.

In the age of the wired head, Rockman considers four human types in information-processing ability: the literate, the numerate, the audial and the visual. It's been tough-going for the last two -- "Now", he says, "to read and write words and numbers is to be literate. There have never been the same rewards available for non word people" -- but their time is coming:

> "In the last decade, many technologies for the communication of the non verbal have come to fruition: computer-animated graphics, video games, colour xerography, videotape, Polaroid instant movies, video discs, laser holographic rock concerts, disco light shows. We are now in the midst of an image explosion whose socio-cultural effects cannot possibly be anticipated in their total variety."

Rockman's summing up of the coming of the age of demand media is anything but anodyne:

> "We are about to enter an incredibly speeded-up, disordered world in which the slopes on the exponential curves for pleasure, disaster, joy, threat and almost anything imaginable are getting exceedingly steep. Those who learn in the next few years to cling to the steep slopes will soon find them flattening out. Those who don't learn will fall onto welfare state cushions to be sure. As for individuals, so for nations, corporations, large and small organizations."*

* "Notes on the Coming of the Wired Heads". Canadian Forum, December-January 1979-80, pp. 11-14.

In this report, information on home video has been culled from numerous sources and covers basic hardware, software, marketing, distribution, trends and studies from 1978 through spring 1980. For various reasons, information on the state of home video in Canada is sparse. That there is an embryonic Canadian home video industry is clear, and future study of its development should be interesting.

VIDEO INDUSTRY TERMINOLOGY

AHD	- audio high density disc
VHD	- video high density disc
VCR	- video cassette recorder
VTR	- video tape recorder
VHS	- video home system
VLP	- Philips optical video disc
LVR	- longitudinal video recorder (Toshiba, BASF)
VCC	- video compact cassette
EVR	- electronic video recording
Videogram	- European term defined at September 1978 Unesco conference "both video disc, video cassette or other analogous material support for any sequence of images with or without sounds and the actual fixation of the sequence".

A. HARDWARE

1. Vidisc Formats

(a) Major Recent

MECHANICAL*	ELECTRONIC**	OPTICAL***
TELDEC	RCA ZENITH JVC/MATSUSHITA	PHILIPS PHILIPS/MCA MCA/PIONEER MCA/IBM PIONEER SONY
	** low price: consumer item	*** expensive, futuristic, industrial item

(b) Developments Over the Years

Country	System Name	Key Year	Diameter	Speed	Capacity	Imaging System	Record
US		1972		15fps	300 stills	magnetic	Yes
UK	Radiovision	1928	250 mm	78rpm	7 mins	mechanical	No

Country	System Name	Key Year	Diameter	Speed	Capacity	Imaging System	Record
West Germany						magnetic	Yes
West Germany	Bildplatte		320mm	1500 rpm	20 mins	laser optical	No
West Germany	Discomat			28mm/ sec tan.	70 mins	opto-electronic	No
US		1973			stills only	laser optical	No
UK	TeD	Telefunken/Decca					
US		1978	305mm	1800 rpm		laser optical	Yes
Canada		1978				laser optical	Erasable
Poland		1978	320mm		30 mins	capaci-tance	No
US		1971					No
Japan		1975	305mm	6rpm	54000 frames	hologra-phic	No
US		1978					Yes
US	Videofilm	1974 → Videonics					

Country	System Name	Key Year	Diameter	Speed	Capacity	Imaging System	Record
Japan	VHD/AHD	1978	305mm	900rpm	120 mins	capaci-tance	No
West Germany	Vid-Records (formerly Diskvision)						No?
Japan	VISC I/II/ S/AD	1977	305mm/ S:178mm	450 rpm/ S:720 rpm	60/120/ 14/60 ms	mechanical	No
Japan	ODSVR	1978	305mm	1800 rpm	3000 stills	laser optical	Yes
US	Disco-Vision	1971	Philips/MCA, Universal Pioneer Corporation				
West Germany	MDR	1974	305mm	156rpm	20-25 mins	magnetic	Yes
Japan		1973				magnetic	Yes
Japan		1977					No?
Japan			240mm/ 152mm		stills only		Yes?
Nether-lands/US	VLP/Disco-Vision	1972	305mm	1800 rpm/-600rpm	120 mins	laser optical	Not yet
Nether-lands	E/I VLP	1976	305mm	1500 rpm	120 mins	laser optical	Not yet

Country	System Name	Key Year	Diameter	Speed	Capacity	Imaging System	Record
UK	Vision-disc	1960				not a disc?	No
US	Selecta-Vision	1975	305mm	450rpm	120 mins	capacitance	No
France	Optidisc	1974	305mm	2-6rpm		laser photogr.	No
US		1973				laser mechan'l	No
Japan		1978	305mm	900rpm	60 mins	laser optical	Not yet
US		1963	305mm	1800 rpm	30 mins?	photographic	No
Australia	Polygramovision	1976		33rpm/45rpm	3 or 25 mins	mechanical	No
US	Chromadisc	1972	305mm	0.5rpm	45/90 mins	optical	No
West Germany/UK	TeD	1970	210mm	450rpm	10 mins	mechanical	No
US	OROS	1972	305mm	1800 rpm	33000 frames	optical	No
France		1973	305mm	1500 rpm	120 mins	laser optical	Not yet
France		1952		1.5rpm		photographic	No

Country	System Name	Key Year	Diameter	Speed	Capacity	Imaging System	Record
Japan/US	Disco-Vision	1977	305mm	1800 rpm	54000 frames	laser optical	Not yet
US	(formerly Zenith)		305mm	1800 rpm		optical	No
Canada		1977	305mm		60 mins	laser optical	Yes
US	(formerly i/o Metrics)		330mm		50000 frames	optical	No
US	Phonovid	1965	305mm	33rpm	400 stills	mechanical	No
US		1977				optical?	Not yet
US		1972→	University of Illinois				

2. VCR/VTR/LVR Formats

'Beta' VCR*		'VHS' VCR**	
Manufacturer	Brand	Manufacturer	Brand
SONY	Aiwa Sears Betavision Sony Betamax Zenith	MATSUSHITA	Akai Curtis Mathes General Electric Hitachi Magnavox Panasonic Philco Quasar RCA Selectavision Sylvania
SANYO	Sanyo Betacord	JVC	JVC MGA Mitsubishi Sharp
TOSHIBA	Toshiba Beta format		

* Shorter tape length; clearer picture

** Longer tape length; picture not as clear

VIDEO 2000***		LVR****			
Manufacturer	Brand	Manufacturer	Brand	Manufacturer	Brand
Philips	Philips Grundig	Toshiba U.S. JVC		BASF	

*** Availability of parts and service; most efficient tape use

**** Low retail price: consumer item

3. Major Hardware Families and Their Software Deals

(a) Philips Family

1974

Philips (Netherlands) Philips (North America)	Video Long Play (VLP)
MCA (U.S.)	Discovision

1978

Philips (sub: Magnavox marketing)	+	MCA (Decca, Universal)	Magnavision
MCA	+	PIONEER (Japan, U.S.)	Industrial Magnavision

1979

MCA	+	IBM	Discovision
Pioneer (50% Pioneer Japan 50% Discovision			Vidisc system based on Philips-MCA Technology

1980

Philips-Sony: Sony uses Philips Vidisc patents

Philips-Grundig: Philips has 25% share: goal is to inject cash into the German firm to strengthen competitiveness of both especially in TV, video and hi-fi.

Universal Pioneer Corp.: vidisc production serves Pioneer system.

MCA is Philips' program supplier. MCA owns Universal Studios and United Artists (Warner Brothers).*

Devlin Productions can transfer programs from Magnavision videodiscs to any videotape format. Devlin handles all domestic video formats as well as SECAM, PAL and PAL-M standards. It will add Selectavision videodisc interfaces in 1981.

Polygram Pictures has been formed by the Polygram Group, an international entertainment conglomerate co-owned by N.W. Philips and Siemens A.G., West Germany: Multimedia oriented.

* According to FCC: "Home Video: A Report", 24, MCA/Universal has an 11,000 plus film collection to draw on.

(b) RCA Family

1980

RCA sells Random House and completes merger with C.I.T. Corp. to concentrate resources in four areas: Hertz, broadcasting, financial and consumer products and services, and electronics and communications.

VIDISC

1980

RCA ——→ Selectavision vidisc system (early '81)
RCA + Zenith ——→ Zenith vidisc system based on RCA technology (mid '81)

VTR/VCR

1977

RCA + Matsushita —→ RCA VTRs manufactured by Matsushita Electric Industrial Co. Ltd., (licensee of Matsushita's VHS system)

1978

RCA + Hitachi ——→ Type C one-inch broadcast helical videotape recorders (TH-100, TH-50, portable)

RCA + JVC ——→ VCR collaboration does not materialize

1980

RCA + Hitachi ——→ Six hour VCR and portable unit for VDT-600 Hitachi-made units

RCA owns NBC.
RCA forms RCA Videodiscs (Exec. Vice-President, Herb Schlosser).

1979-80

NBC forms NBC Enterprises Division (President, Mike Weinblatt).

RCA gets NBC videodisc rights to specials and movies.

RCA allies itself with CBS: CBS obtains licence to manufacture videodiscs using RCA's format.

CBS forms CBS Video Enterprises (President, Cy Leslie).

RCA + Paramount explore development of vidisc programming: Paramount agrees to add seven new titles yearly.

RCA makes licensing agreements with: 20th Century Fox
MGM
Walt Disney
J. Arthur Rank
United Artists
Warner Bros.
ITC
Avco Embassy

RCA + EMI: some EMI holdings are licensed to RCA Selectavision under non-exclusive videodisc rights (EMI - Thorn also are producing discs for Matsushita/JVC)

(c) <u>Sony Family</u>

<u>1972</u>

Sony ——→ Sony-U-Matic

<u>1975</u>

Sony ——→ Sony Betamax
Sony + Zenith ——→ Zenith markets Sony Betamax under its name as do Aiwa and Sears

<u>1977-80</u>

Sony ——→ Beta-1, Beta-2, Beta-3

<u>1979</u>

Sony + Philips ——→ Cross-licensing agreement on Philips optical vidisc system, plus V-2000

<u>1980</u>

Sony + RCA ——→ Possible cross-licensing agreement on RCA capacitance vidisc system

Sony + CBS ——→ Sony may use already existing agreement on CBS software production for capacitance vidisc system

(d) <u>Matsushita Family</u>*

<u>By 1978</u>

Matsushita
+
licensee RCA > VHS VTR

Matsushita ——→ VISC (electronic videodisc system)

* For information on Magnavox, see <u>Philips Family</u>.
For information on RCA, see <u>RCA</u>.
Included under Matsushita are: Panasonic, JVC, Akai, Curtis Mathes, General Electric, Hitachi, Quasar, Sylvania, MGA, Mitsubishi, Sharp.

By 1979

Matsushita (parent)
+
Panasonic and JVC (controlled) → VHS VTR

Matsushita
+
licensees: Akai, Curtis Mathes, General Electric, Hitachi, Magnavox Philco, Quasar, RCA, Sylvania. → VHS VTR

JVC → VHD/AHD Videodisc system

JVC + MGA
Mitsubishi and Sharp → VHS VTR

1980

Matsushita — Videodisc system based on JVC VHD/AHD (Visc defunct)

VHS VTR software: major producers/distributors supply software in VHS format (see SOFTWARE COMPANIES)

1980

Vidisc software production:

JVC
+
Thorn - EMI
Decca (Europe)
Capitol Records (U.S. subsidiary)
→ Matsushita and JVC VHD/AHD discs

4. Major Vidisc Systems

(a) Philips Family

(1) Magnavision

Magnavision/Discovision technology, similar to but incompatible with French Thomson - CSF, uses optical technique. A laser reads video/ audio information in billions of tiny bits on a 12 inch plastic disc revolving at 1800 rpm. The discs can store up to 54,000 frames of information, one for each track on the disc, 60 minutes per side. It can freeze-frame, move in slow motion backward or forward, find any one frame, display it like a page, repeat a whole section of film continuously until instructed to skip automatically to a new sequence. It plays films with two sound tracks in different languages and allows the viewer to switch between at will. The video signal is modulated to a carrier frequency for either channel 3 or 4. The system reproduces 330 lines of picture image. Magnavision overshadows VTRs as a means of reproducing pre-recorded films; in 1978, it sold for $695. In 1980, it sells for $775 U.S., and offers a new one-hour disc. Doubling the length involves putting twice as many frames on the disc, which requires varying the position of the control pulse locations, causing the drive speed to drop from 1800 rpm to 600 rpm in a one-hour play. Older half-hour discs play at constant 1800 rpm. Canadian 1980 Magnavision cost: $895. In 1979, Knox County Public Library System (U.S.) was the first public library to use the Magnavox-Magnavision videodisc system to research its library applications.

(2) Discovision

Industrial Magnavision (Discovision): MCA originally formed the partnership with Pioneer Electronics (Japan), produced and sold 10,000 Magnavision players for industrial use. Each machine was equipped with a microprocessor and 7,000 were sold to General Motors for $1,650 each. In 1979, MCA folded partnership with Pioneer and entered into a 50/50 partnership with IBM to exploit the technology's potential for storing information: one disc holds 14 billion bits of computer data; and potential for sales: Magnavision is too sophisticated and pricey for the consumer market. Discovision's potential for mixed graphic and textual information, coupled with high-speed access and low cost makes it ideal for any view data applications. Industrial, educational and government groups are researching learning systems for the so-called "intelligent videodisc" combination of videodisc and low cost microprocessor which provides visual, verbal and print instructional routines (Electronic News, May 29, 1979, 14). For these expensive materials, as for copyrighted entertainment, the play-only feature is a built-in safeguard against duplication. In its order, GM considered Magnavision as replacement equipment for microfiche readers in parts of its information retrieval services. The National Library of Medicine, with Philips, worked towards new storage applications for vidisc. MCA is supplying 10,000 systems to Chevrolet dealers (Video User's Marketplace, May 28, 1979, 1). The Discovision videodisc system includes the player, 19-inch colour monitor, cabinet, five-year manufacturer's warranty and a series of 1,100 hours a year of disc software for sales, training, repair and parts information. Price is $3,000 for hardware, $1.70 hour for program material. R&D industrial data applications are also underway by Atlantic Richfield, Exxon, IBM & Xerox (Variety, Sept. 5, 1979).

ITA Seminar 1980: Discovision showed only its $2,600 industrial machine, DVA 7820, now used by Westinghouse, Control Data and Hughes Aircraft.

(3) Pioneer

In 1979, MCA switched partners from Pioneer to IBM. In 1980, based on Philips-MCA technology, and similar to the Universal Pioneer-MCA Industrial Magnavision, Pioneer produced a $995 videodisc player, which includes an infra-red remote control, PCM adapter (possibility of audio-only discs) and frame-searching feature. Unlike the industrial version, this Pioneer model has no built-in microprocessor.

(b) RCA Family

The RCA Selectavision capacitance videodisc system is close to conventional phonograph format with a copper-clad sapphire stylus and 12 inch disc. It doesn't have Magnavision's features but produces picture and sound as good. The RCA System is incompatible with Magnavision but it may have been possible to combine it with a videodisc called VISC which Matsushita had been developing. RCA says that the Selectavision videodisc can be pressed on existing audiodisc pressing equipment. Selectavision is about $300 cheaper than Magnavision, making it a consumer item. Drawbacks to RCA's capacitance disc system: 1) grooves are easily damaged, 2) tracking is done mechanically instead of electronically, precluding fast-find and freeze-frame, 3) consumer must have a large supply of discs to play (RCA-CBS deal). In addition to manufacturing and distributing Selectavision discs, CBS will also produce its own disc programming, but without stereo sound. RCA began developing Selectavision in 1972 and it will be on the market in early '81.

In 1980, Zenith adopted RCA's capacitance videodisc format. Each company controls more than 20 per cent of U.S. TV set sales. The joint support of a single videodisc system could solve some of the incompatibility problems, and the Zenith/RCA pact includes mutual access to videodisc patents. Zenith's first players will be marketed in mid '81 at less than $500.

(c) Sony Family

In 1979, Sony and Philips developed a cross-licensing agreement on a laser/optical vidisc system (also includes digital audio parts, plus the Video 2000 videocassette system by Philips). Sony moved from total commitment to tape. The Sony videodisc system is an institutional, not a consumer item. It uses optical/laser technology. It plays back at different speeds - forward, reverse. It has freeze-frame and index, plus random access. It will be marketed in mid '81. The user of the Sony disc system is a high end institutional network with over 100 play back locations producing more than one program per year of high quality visual material. The user would need random access but not fast turnaround time or field recording. Sony is also keeping options open for a capacitance system (could become a licensee of RCA technology as well as Philips). Sony has a record-making agreement with CBS as does RCA, so software for the capacitance disc system will be viable.

(d) Matsushita Family

In 1978, JVC (Victor Company of Japan), owned by Matsushita, introduced its high density audio/video disc system - VHD/AHD Video Disc system. The 12 inch grooveless disc employs capacitance techniques for recording one hour per side. It features slow and fast motion, freeze-frame and random access, and includes a high resolution pick-up system for future technical development. Existing disc pressing plants can be used. It is aimed at home video and industrial markets and is designed for both video and super hi-fi audio. JVC - VHD/AHD seems much like a cross between the RCA and Philips/MCA systems. It will be marketable in late 1980. Price: basic unit - $400 - $500; with options - about $600. At the NAB exhibit, April 1980: U.S. JVC introduced a 2-piece, compact lightweight magnetic video disc system (VM-200) for the broadcasting, industrial, and educational market. Price: $24,000 or $26,000, depending on options. Also available are a series of direct-drive videocassette recorders - "Tape Handlers" - which includes a recorder, player and editor for under $10,000. Matsushita, JVC's parent, had a video disc system called VISC. It didn't use the same technology as JVC VHD/AHD, but used a stylus in a conventional groove.

By early 1980, Matsushita decided to proceed into videodisc technology using the grooveless capacitance VHD AHD system of its JVC subsidiary. The decision to concentrate on the JVC format was stimulated by the need to rush to market with a system before RCA Selectavision had Magnavision/Pioneer formats grabbed too great a lead. The videodisc system could be priced in the $500 to $600 range -- possibly higher than RCA's but well below the laser/optical systems used by Magnavox and Universal/Pioneer. It combines good features of both competing technologies (Videonews, June 6). The electronic stylus can skip between sections of the disc, thus making freeze-frame, instant frame-search/access and other special effects possible (which can't be done on RCA's grooved system). JVC and Matsushita officials--like those of Sony and other companies--have not decided whether to concentrate on the industrial or home entertainment market. The decision to enter the market would seem to indicate preference for a consumer version, although the professional market may be the more likely one for now.

JVC showed a recording videodisc machine at the NAB convention in April. The professional unit -- priced at $22,000 -- is now being sold in Japan and is primarily for instant replay, slow-motion and other special effects. It has a 20-second capacity and is akin to other firms' units for broadcast use. JVC sources indicate the technology may not be easily translatable to home entertainment units. For one thing, the disc and heads would have to be replaced at least once a year -- at a cost of upwards of $2,000.

Features of the JVC VHD/AHD video disc system

Picture and sound information, including stereo, are recorded as 'pits' on the disc surface without grooves to guide a pick-up stylus. The disc, which rotates at a constant speed of 900 rpm is capable of playing a one hour long program per side.

For recording, a single laser beam is split in two, one half for recording information to be retrieved, the other for recording the tracking signal.

Information and tracking signals are simultaneously picked up electrically as capacitance variations between the disc surface and and electrode on the tracking stylus.

The cantilever arm which holds the stylus is servo-controlled to track the imaginary grooves on the disc and to correct for the time base error of the rotating disc by means of the Electro-tracking System.

There are no actual mechanical grooves on the disc's surface to guide the stylus. Instead, the stylus merely slides along the surface and is guided electronically to pick up the recorded signals. This feature enables the pick-up arm to move freely over the entire surface of the disc and permits special effects such as random access, still frame, slow and fast motion to be achieved. The sliding stylus, therefore, has 10 times the contact area that a similar 'stylus-in-a-groove' system has, thus prolonging the life of both the stylus and the disc.

Electro-conductive PVC plastic disc material requires no additional processing after being pressed.

Stylus Control (Electro-tracking System)

The most important feature of the VHD/AHD is the control of the stylus along the disc surface. To cause the stylus to trace a single track and to perform variable or random access playback, it must slide along the smooth, flat surface of the disc.

The stylus is mounted on the end of the cantilever pick-up arm, to the other end of which is attached a magnet. Fixed coils are mounted near the magnet: a single coil is wound around but not in contact with the magnet and a pair of vertical coils are mounted one on either side of the single coil and in phase opposition to each other.

The stylus can move transversely and longitudinally in response to the particular current flowing in these coils. The current is varied by the tracking error signal, by the time base error signal or by a command to move the stylus to a desired track, permitting various functions during playback.

Playback System

Several combinations of the player and auxiliary units provide different video and audio functions.

In the case of video operation (VHD), normal (back and forth), special effects (still, slow, fast motion, back and forth) and fast search (back and forth) modes are performed by the player itself. By connecting the random access unit to the player, the exact locating of a single track and the automatic playback by memory software including multiple effects are possible. Wireless control of the random access unit by a remote controller is available.

In the case of audio operation (AHD), super hi-fi stereo music can be played by connecting the PCM (pulse code modulation) decoder to the player. Connecting the random access unit to the PCM decoder enables the location and automatic playback by memory software of the beginning of each musical selection as in the video case. Connecting the desired unit to the player can add uniquely different functions to both audio and video operations.

The Disc

The disc is designed to record multiple pits in its smooth, flat surface. Although the information pits are recorded spirally, the tracking pits between them permit a linear playback signal. The information pits produce either video and audio signals or only audio signals, and the tracking pits precisely control the stylus tracing a path along the information pits.

Mastering

Recording is performed using a master disc made of glass. The smooth, flat glass disc is coated with ordinary photo-resist. While rotating at a speed of 900 rpm, minute laser beams are irradiated onto the disc, the source of the beams being moved radially at a constant speed. As a result, fine pits are recorded spirally on the glass disc.

Again, as in the stylus control system, the laser beam is split in two - one half for the information signals, the other for the tracking signals. The information and tracking pits are recorded simultaneously by these beams. A metallic disc is produced from the glass master disc by the conventional audio process.

The JVC VHD/AHD system is very similar to that first described by RCA five or six years ago and since amended (e.g. to eliminate the need for metalling coatings on the disc, etc.).

JVC's system overcomes some of the inherent drawbacks to the RCA system by having no grooves, thus permitting the stylus to move freely across the diameter of the disc as well as following the signal track. Locking it onto a single revolution, therefore, would produce a still frame effect - in fact, two cycled frames, as the rotation speed of 900 rpm means that there are two frames per revolution.

Frame retrieval is also possible, although that implies that more sophisticated, possibly digital techniques must ultimately be employed to retrieve only one of each pair of frames and reject the other. This could be done by the address code technique being developed by Philips for its ultra-long play audio disc in which up to 20 or more different groups of digitised audio signals are compressed into each revolution. So far, JVC's only mention of this aspect is to memory systems in the random access unit.

General Electric

In 1980, General Electric plans to announce its moves into the videodisc business. The company is now engaged in vidisc development. No decision on format or compatibility has been announced though it has close ties with Matsushita in VHS/VTR now.

5. Major VTR/VCR Systems

(a) Philips Family

Philips introduced the first domestic VTRs in 1971. The Philips VCR-LP format: playing time is around two hours ($15 hour) competing with Matsushita (VHS) and Sony (Beta), with the VHS format adopted by other systems including Sony. Philips adopted a new format, VCC (Video Compact Cassette), closer in size and technology to VHS but incompatible with VHS. VCC is double-sided. VHS records only on one side of the tape. VCC's playing time is eight hours per tape. VHS's playing time is three hours. VCC is cheaper, at $5 per hour and it's guaranteed unchanged for 10 years, making the Philips system more economical and convenient for marketing and buying, so Philips contends. Philips introduced the new Video 2000 in 1979 and contended that it would remain unchanged for 10 years; but the mean average life of the previous five systems is 3-6 years, so the V2000 may be dead by 1982, following the demise of the VCR in 1979 and the VCR-LP in 1980.

Philips' V2000 is a complete break from the previous VCR N1500/N1700 series (co-axial cassette). Available playing time is doubled by using only half the width of the tape at a time and turning over the cassette at the end of its run. The compact cassette allows two runs of four hours each. The actual cost of tape per hour is reduced to less than a quarter of that in the VCR N1700. It can accommodate audio/stereo and has a control track for future applications.

The V2000 is offered as a system for which a full range of compatible machines will be presented. The first of these is the VR 2020 recorder based on a built-in microprocessor and keyboard. The self-contained tuner has a station-search facility for up to 19 television stations (code numbers are stored in memory for automatic recall). It features improved program access: start and stop times on five days can be selected over a period of up to 16 days ahead for any five of the television channels previously coded on the tuner. An automatic cassette reverse switching to the second track could be fitted on future models. Further accessories: infra-red remote control and connexion for direct recording from an external camera and microphone which Philips will offer in 1980. The VR 2020 is priced about 30 per cent higher than the VCR N1702. Philips will be manufacturing it in Vienna. Grundig was producing a recorder based on the V2000 system in late '79 - an independent design making use of the Philips micro-world chassis.

At the ITA Seminar, March 1980, Philips demonstrated the Video 2000. It is on sale in Germany, Holland, Austria (Spring 1980), priced at $1,400. Philips will bring the machine to the U.S. by the end of 1981. The VR 2020, offering freeze frame/frame access and a changer to handle up to six cassettes (48-hour playback time), may have institutional applications.

(b) RCA Family

In 1979, the consumer market was offered the VDT-600 RCA Hitachi-made six-hour VCR and portable unit priced at $1,350 and in 1978, RCA and Hitachi had introduced Type C one-inch broadcast helical videotape recorders (models TH-100 and TH-50 portable).

In 1977, RCA introduced a VHS recorder manufactured by Matsushita. It uses ½ inch magnetic tape, has helical scanning, tuning/transport controls, slightly slower writing speed at 228 inches per second, has less capacity for analog information storage but allows slower tape travel. VHS uses the same size and quality of tape but has longer running time, less picture clarity. The RCA video cassette recorder was priced at $1,000, $300 cheaper than Sony Betamax. Newer models (VHS-4) have a 4-hour maximum playing time with a switch to select 2-hour or 4-hour tape speed.

In 1979, the latest version is capable of six hours of recording on T-120 tape. The latest versions of VHS and Beta offer the following options: built-in digital clock-timers, automatic fine tuning, remote pause control, audio dubbing, memory tape counter, microphone and camera inputs, automatic preprogramming or a picture image during fast-forward and pause ($1,350 approximately). Battery-powered portables are cheaper (around $800): a basic machine without the tuner.

(c) Sony Family

In 1972, Sony introduced the Sony-U-Matic: a $\frac{3}{4}$ inch tape cassette mainly for industrial, educational, business use, including broadcasting which adopted $\frac{3}{4}$ inch cassettes. It was priced around $1200 in 1972.

In 1975, Sony introduced the Betamax as a home video market item. Betamax is a helical-scan videotape player using $\frac{1}{2}$ inch tape in modules, paperback book size. The non-console model with tuner carried an introductory price (1975) of $1,300. The advantage of $\frac{1}{2}$ inch Beta format is tape economy.

In helical recording each magnetic track laid onto the passing magnetic tape contains electronic information for one-half frame or 262.5 scanning lines on the TV screen. In earlier recorders these tracks were spaced apart by guard bands so there would be no pick-up of the next track (cross-talk) if the head or tape transport mechanism was mistracking. By using two heads of different orientation, guard bands could be eliminated. Cross-talk in the Beta format was not a problem through misalignment. Color phasing is also changed between tracks, eliminating cross-talk if one head mistakenly picks up part of a neighboring track. This process provided good picture performance on standard color receivers, with tape speed of less than two inches per second, but with a writing speed of 271.5 inches/second.

Besides video information, there are two other tracks: audio is recorded on one tape edge; on the other tape edge there is recorded a control signal which synchronizes tape speed during recording and playback.

Betamax is about the size of an electric typewriter and operates in much the same way as the U-matic or cassette audio recorder: input signal switches, tape transport controls of fast forward and reverse, play, forward-record, stop and pause. Playing time of Betamax on the standard L-500 cassette ($17) is one hour; on the L-750 extended play cassette ($21), 90 minutes. The 1979 Beta-2 plays two hours and three hours on respective length tapes. The newer version has a "record time" speed control allowing the Beta-2 to play tapes recorded on Beta-1 format. Tapes recorded at Beta-2 speed cannot be played on the earlier Betamax version.

In 1979, the Beta-3, with slower speed, increased to 4½ hours maximum recording time on an L-750 cassette, and a five hour tape capacity is available in 1980. Beta-3, 3-day programmable, can handle the original Betamax one-hour speed, plus the new X2 and X3: the latter having a 4½ hour capacity using new L-750 cassettes. Price: $1,250 (similar Sony-built Zenith unit with five hours capacity, retailing at $1,195). Sony is also bringing out the SL-5600 capable of programming four events for up to two weeks ahead, plus Beta Scan.

(d) <u>Matsushita Family</u>

In late 1977, <u>RCA</u> introduced a home video tape recorder manufactured by Matsushita, competing with Sony Betamax. VHS is incompatible with Beta. Like the Beta, VHS uses modules of ½ inch magnetic tape, helical scanning, standard tuning/transport controls. VHS has a slightly slower writing speed, 228 inches/second. It has less capacity for analog information storage but allows slightly slower tape travel. VHS, compared to Beta, uses the same size/quality tape but trades a slight loss in picture clarity for longer running time. The standard VHS cassette (T-60) on early VHS (VHS-2) plays for one hour: price $18. The double-length T-120 is priced at $25. RCA introduced the system priced at $1,000, $300 lower than Betamax. Newer models (VHS-4) have a four hour maximum playing time with a switch for selecting the two hour or four hour tape speed. By late 1979, the system was capable of six hours' recording on T-120 tape.

At the CES Summer 1979, JVC introduced the two hour/six hour HR-6700 unit. JVC said it wouldn't compromise quality of the machine by slowing down to a four hour unit, so the new extended play mode is accomplished by a four-head design. It also features an oil-damped housing for ultra quiet tape eject, 6-day programmable feature (seven days for the same show), plus voice compression (but only in the two-hour mode). JVC also has a 6-functional remote control (for freeze-frame, fast and slow motion with sliding tuner letting the user choose the slow-motion rate).

At the CES, Summer 1979, Akai's first entry into home video was a one-model line-up called "Acti-Video". It included two major components: VP-7300 recorder/player and VU-7300 tuner/timer. In the VHS format, it has a two-hour capacity and is seven-day programmable. Features include freeze-frame, slow motion, fast playback. It sells for $1,495, and is based on Matsushita VHS. In cameras, Akai offered a 3-2 pound VC-X1 color camera priced at $800 without the optional electronic viewfinder.

In 1978, the type-C one-inch broadcast helical videotape recorder was introduced by RCA and Hitachi. Hitachi was expected to begin deliveries of studio and portable models with editing and digital time base correction in 1979. The machines were introduced in the U.S. at the NAB convention, 1979.

At the CES, Summer 1979, the Hitachi portable VHS unit included two-motor direct drive, special cassette loading machanism and is one-day programmable. It has a home movies feature to eliminate glitches caused by stop and start of camera. A built-in automatic assembly feature triggers brief instant rewind to create sharp cuts between different takes. Hitachi's 2-4-6 hour 7-day programmable VCR was out in late '79 and is capable of handling up to five programs. It is based on Matsushita VHS. By the time of the CES, Winter '80, Hitachi added a remote control unit for its portable VHS recorder making it possible to control the unit even on a back-pack carrier.

The Panasonic portable PV 3000 was out in 1980 and the PV-1600 6-hour programmable in late '79. The system is based on Matsushita VHS.

At CES, Winter 1980, Panasonic announced $40 price cuts in VCR. It began marketing a 2-4-6 hour portable Omnivision unit in April. By January, 1980, Panasonic developed two portable cameras to receive power from Panasonic videocassette recorders or power supply/camera's AC adaptors with numerous technical advances. Also, Panasonic developed a high performance ¾ inch videocassette editing system with video, versatility and time-saving editing. It includes dial forward, backward search, cruise control, reduced pre-roll time, return, preview, review, go-go functions. Precision editing is via 2 LED address indicators that show exact in/out editor points.

By March 1980, Panasonic introduced its second solid-state video camera using an LSI charge coupled device, BS-701. It is a high resolution b/w camera: 660 grams and high resolution of 280 horizontal lines and 350 vertical lines. The CCD image sensor has four functions: image pick-up, sequential electronic signal transfer, electric signal storage, sequential readout.

In April 1980, at the NAB exhibit: Panasonic Video Systems introduced two new ENG color cameras: AK-760 and AK-710, as well as a ¾ inch video cassette editing system for professional and broadcast markets.

At the CES, Summer, 1979, Quasar showed a prototype of the portable 2-4-6 hour unit available in 1980. The current line includes the six-hour capacity machines at $1,100 (VH-5020 not programmable) and the $1,325 VH-5150 programmable (7 days, 4 programs). The system is based on Matsushita VHS. In cameras, Quasar offered a $960 motor drive 6-1 zoom unit with electronic viewfinder (VK 720RA) and two new color cameras.

At the CES, Winter '80, Quasar was adding portable VHS units, plus feature-filled units. In June, Quasar introduced a 14-day, 8 show programmable portable unit. In cameras, Quasar is adding a moveable electronic viewfinder for left-handed or right-handed shooting.

At the CES, Summer '79, Sharp offered a six hour programmable unit and camera. The VC-6700 ($1,395) features an Automatic Program Locate Device, random access feature plus pause/cue signal. The 7-7-7 programmable memory offers capacity to preset up to seven different shows on seven channels per week in advance. Direct memory permits automatic return to the beginning of the program. It is based on JVC VHS.

At the CES, Winter '80, Sharp showed its VC-6800 7-day, 7-channel programmable unit, which features a front-loading cassette system to keep dust out of the head area. It also offered the XC-320U camera: $3,000 unit designed for industrial/educational uses, which would appeal to serious home video users because of design and specifications.

At the NAB 1980: Sharp showed its ENG camera - XC-700: 3 saticon tubes, prism optics, auto white balance with memory, I & Q encoder, color bars, etc.

In EVR, MGA-Mitsubishi developed cartridge players for TV, using miniature film systems based on EVR developed by CBS in the late '60s.

6. Other Video Systems

At CES Winter 1980, BASF hoped to have its LVR ready for summer 1980, and Funai showed a light weight quarter inch VCR.

Ikegami has produced a ¼-inch, 30-minute, 7-pound VCR. The working prototype operates on batteries or electrical current and is expected to retail for about $1,200-$1,300. The unit -- no larger than many portable tape recorders -- may be marketed as early as the third-quarter of 1980. The company is showing the VCR in various U.S. cities to determine the feasibility of offering it in its present form. The VCR is being manufactured by another company but Ikegami expects to be the only sales representative. Ikegami is aiming the unit at the home, industrial and medical markets.

At the 1980 NAB Conference, IVC displayed the new IVS 1-11 High Band one inch helical videotape recorder priced at $30,000-$35,000, plus new 10 MHZ video bandwidth version of its IVC-815 video tape recorder, priced at $12,000 (International Video Corp.).

At the CES, Summer 1979, Sanyo presented the VC-5500, programmable for seven days, five programs. It handles 4½ or 5 hour cassettes with remote control features, and costs $1,495. It offers double speed playback and 15-times speed for reverse and forward scanning, plus pause and still frame capacity. The VC-5000 ($1,095) has a one-day programmer and 4-times search and playback capacity. The system is based on Beta. At the CES, Winter 1980, Sanyo was asking $695 for the basic 3-hour Beta VCR (down from $895). The discount price is $600.

In 1979, in the Soviet Union the electronic design agency SKB began developing a vidisc player to be connected directly to an unused channel of Soviet-made TVs. Melodiya is planning to produce video disc software. The system may reach market in 1980.

At the CES, Winter 1980, Toshiba offered its next generation model LVR, with a capacity increased to two hours with use of 300 separate tracks (up from 220, June, 1979). It is priced in the $500 range.

7. Video and Assorted Hardware

Home Computers

(1) In 1979, Texas Instruments offered the TL 99/4 home computer with solid state software command modules with ready-mode computer programs (audio cassette size). It has a terminal and a CRT screen, plus cartridges ($20-$70 each). It offers sound effects, 16 colors, extensive BASIC programming language. Software: children's educational programs, games, home financial decisions and statistics. Accessories: speech synthesizers ($150) and word printers.

(2) At the CES, Winter 1980: song writing programmes were available; cartridges on video game units offer possibilities including character generator for home video-makers to put graphics or titles on tapes. Computer services: TCA's "The Source" and Micronet - home computer access to time-shared data systems.

(3) In 1979 Mattel offered Intellivision and other Mattel programmable games at $275 for each of two components: game console plus keyboard; used with Playcable (Jerrold/General Instruments' two-way cable TV hardware).

(4) Atari offered new home computers (the 800 at $999.99 and 400 at $549.99); cartridges - $40-$70 range for education and top games; peripherals - printer, program recorder, floppy disc drive unit. Atari has a deal with Control Data Corp. for software.

In February, 1980, exclusive rights for use of the name "Space Invaders" was granted to Atari, Inc. by Taito Corporation, Japan, in the manufacture of non-coin operated video games, personal computers and hand held electronic toys. Atari is a WCI (Warner Communications Inc.) division. It recently introduced the Space Invaders video game cartridge for its programmable video computer system.

(5) In 1980, Zenith Data Systems, the home computer subsidiary of Zenith Radio Corp. offered a $1,000 home computer system. Zenith

acquired Heath Co. home computers in Fall '79. Parent Zenith will distribute via national dealers. It is also building STV decoders and PATV converters and is planning new lines: phone answering features, teletext capacity, etc.

(6) In 1980, APF Electronics showed its home computer line with cartridge games.

(7) At the CES, Winter 1980, manufacturers showed feature-filled units, hand-held calculator size. Quasar's unit can be fitted with chips giving additional features when hooked into the TV screen.

Video Projectors

(1) At the CES, Summer 1979, Kloss Video Corp. showed its Novabeam projector and 6½ foot screen built around a Magnavox chassis with cordless remote tuner and a new variation on the Schmidt-type lens which offers good viewing from up to a 35° angle. The screen is special foil material which can be touched without affecting the projected image. A feature is a convergance testing unit for color tune-up. It is priced at $2,495.

(2) Advent showed its first single unit projection system, Model VB 125, with five foot screen as part of the one-piece projector/cabinet combination. It was priced at under $4,000 in September, 1979.

(3) Electronic Systems Products introduced Aquastar, a $5,500 three tube unit with liquid coupled lens and liquid cooled tubes. It can handle up to 12-foot wide images on a flat screen.

(4) Projections Systems showed a bright rear screen projection unit with new lenticular screen permitting bright viewing from any angle.

TV Sets

(1) In 1980, RCA Service Company's commercial television line includes a 19-inch solid state color monitor/receiver for use in television

production facilities, television stations and video tape production centres.

(2) Sharp Electronics introduced a "two screen" TV for recording a second program on VCR while watching the principal program. Example: a user could watch two tennis games at a time, recording the second game for later full-screen viewing. It sells for over $1,000 in Canada.

At the CES, Winter 1980, Sharp displayed multi-screen TV with up to nine b/w screens - a real-time TV Guide: the user can monitor several channels and choose which one to watch. It offers freeze-frame on each picture, making it possible to capture a sequence of images if watching an instructional cassette (e.g. tennis swing).

(3) Toshiba displayed a voice-activated TV set. The user speaks commands into a microphone, voice synthesis says 'Okay' and obeys or asks the user to repeat. Toshiba also exhibited a prototype of a multi-screen TV set, offering four colour pictures in quadrants (or one colour picture inset into full-screen image from another channel).

Miscellaneous

(1) In 1980 Carver Corp. introduced a Sonic Holography-Auto correlation Preamplifier which synthesizes music away from the traditional loudspeaker and offers possibilities for similar video experimentation.

(2) Marshall Electronics showed a dubbing kit and a portable power pack added to its line of video accessories which include connectors, signals splitters, etc.

(3) Showtime Video Ventures showed a line of image enhancers, a video stabilizer and a video distribution amplifier.

(4) In 1980, Sony marketed the first commercial color video camera to use completely the solid state image sensor, CCD. This could

bring down the price of video cameras in future.

At CES, Winter 1980, Sony introduced a new special effects generator which enables home video-makers to superimpose titles, and mix two feeds. Priced at $150, the HVS-2000 unit works only with specific Sony cameras but could be used with any VHS or Beta system.

8. Distribution and Marketing: Major Hardware Companies

(a) Philips Family

In disc technology, Philips family's main competitors are RCA Selectavision and Matsushita. In VTR/VCR technology Philips' competitors are Matsushita (VHS) and Sony (Beta). Philips' videodisc systems use optical techniques and do not rely on capacitance or piezo-electric systems.

In 1978, Magnavision (Philips/MCA) was introduced in Atlanta, Georgia. The demand for players outstripped supply. The marketing slogan was "The World on a Silver Platter". MCA wanted to push harder than Magnavox to catch up on the lead taken by cassettes, but Magnavox was doing well with VHS video-cassette recorders. With RCA competition, MCA and Magnavox might want to move into new markets, i.e. Britain. Nearly all components for Magnavision are made in Europe. The contract stipulates supply of parts for only 20,000 machines. With indigenous U.S. production developing in 1979, the European output could be diverted probably to Britain. The programs will make or break the play-back only system and successful marketing of the Philips/MCA system depends on the reduction of costs for optical components, plus introduction of the solid state laser for this reduction. The MCA/IBM joint venture into videodiscs heightens the profile of laser-optical technology, but Sony sources suggest that Discovision Associations should have retained IBM in the name: a marketing plus to industrial users.

Second test market: 1979, Seattle Washington. Distribution goes nationwide by mid-1980 when production increases and training of servicers is complete. The only service centres are in Seattle and Atlanta. Only firms now authorized to service Magnavox VCRs will be trained for the disc units. Magnavox says the disc unit is easier to service than VCRs. Simplicity and indestructibility of discs will result in fewer problems than with VCR equipment. On the whole, Philips' test marketing of its disc player has been disappointing because of a shortage of discs. In 1979, a dealer in Miami was offering scarce Magnavision videodisc players and discs at $1,000 over the list price, making a going price of $1,700, and $10 for each above the usual disc prices.

At a CES exhibit, a Magnavox official said that his company's Fort Wayne headquarters doesn't have a complete set of 200 titles from the MCA catalogue despite MCA promises that all titles would be available by March, 1979. He also stated that the smallest percentage of videodisc player purchasers are home users and that the company has back orders beyond 1980. MCA planned to phase in a second production line by the end of 1979. There is an unprecedented sale of pre-recorded discs, far out of line with the number of players. People are buying discs for souvenirs, for resale at a profit or in anticipation of buying a videodisc player.

At the 1979 ITA home video seminar, marketing predictions on VCR and vidisc player sales differed: Magnavox felt that sales would rise from 500,000 units in 1979, to one million in 1985. Disc players would be two million that year. In 1985, sales of discs would be 80 million units for a combined hardware/software disc market of $2.9 billion vs $1.3 billion for VCRs, blank tape and pre-recorded cassettes. It is felt that disc players will outsell cassette players because of the cost difference ($800 compared to approximately $1,400). MCA and TV Digest say that sales of VCRs are slipping behind the 1978 pace and that marketers must reach beyond the affluent to attract the average consumer.

The general consensus on disc: the optical/ reflective disc is not yet a consumer item because the players are too difficult to make and lack reliability. To date, Sanyo and Sharp are working on optical discs. Sony introduced its optical version. Toshiba and Matsushita have capacitance systems. (See RCA for its developments.)

At the ITA, 1980, Magnavox said that, at best, it is dealing with 10 per cent of households in marketing vidisc systems and the market will stay that way for 4-5 years. The most pessimistic prediction is that in a 5-year period, there will be 1,400,000 players. The most optimistic prediction is that there will be 8,000,000 players in the same period. The Magnavox prediction of sales is between these two figures and it estimates business will be about $4.2 billion by 1985. (For consumer profile, see Trends & Studies.)

In March 1980, Magnavision players and Discovision software went on sale in Cleveland and Phoenix, Pittsburgh, Minneapolis - St. Paul and Buffalo accompanied by heavy media advertising. Target date for complete national distribution is early 1981 - the same time as RCA Selectavision and a little earlier than Zenith will be marketed.

Pioneer hasn't set up its distribution system yet; until 1980 it has been audio-oriented, and retail outlets are audio or department and chain stores.

(b) RCA Family

RCA's main vidisc system competitors are Philips/MCA Magnavision and Discovision. The FCC: "Home Video: A Report",.24, says that

> "RCA joins the fray with a product developed fully in-house, backed by extensive...experience in consumer electronics and programming, and offered at about half the cost of the Magnavision player. The Magnavox-MCA entry, on the other side, has clear technical superiority in specialized applications, a Star-Wars image, the 11,000 plus film collection of MCA-Universal and the resources of capital and international marketing experience of Philips, one of the world's five largest companies."

The Report goes on to state that

> "Though popular entertainment will be offered on discs of both systems, optical, full-function systems such as Magnavision appear likely to be the sales leaders for institutional, instructional and videophile use. Lower priced formats such as Selectavision will be more popular among viewers whose

dominant interest is movies, sports, anthology material and other continuous-play forms. If either of the two formats fails in its respective target market, it is unlikely that there will be new entries of that format-feature combination. Producers using the optical format would be able to easily produce a basic, simplified continuous-play model at lower cost for entertainment programming. Thus the optical format could respond to a vacancy in the popular-program market. But producers using the contact systems cannot develop the full features characteristic of the optical disc players."

In the trade journals, it is generally felt that unless Philips can reduce production costs, consumers will buy RCA. RCA's plan is to ally itself with CBS (meshes recorded music distribution and production networks which create the base to market videodiscs) and with Zenith (broaden the base for distributing disc system hardware). The RCA-Zenith tie could sew up the market: TV set makers such as GE and Sylvania might swing away from the Magnavision format and consider affiliation with Selectavision. Zenith's initial supply (up to 50,000 units) could come from RCA's factory, labelled Zenith. RCA is committed to sell 200,000 videodisc players under its label in 1981.

RCA estimates that within 10 years, vidisc player annual production will be 5-6 million, prerecorded disc production will be 200-500 million, and with a market penetration of 30-50 per cent, potential revenues will be $7.5 billion annually. Within 10 years, 30-50 per cent of U.S. homes with color TV will have videodisc players. RCA is banking on its distribution network through 5,000 retail outlets. It predicts that there will be a greater market for certain features on videodisc than there is today at the box office. As in the case of feature films, some programs made for television will go on disc before they go on air - an income source for program creators. Music vidiscs will be released at the same time as their record counterparts. Producers and writers/directors will be less restricted.

The RCA system will be geared to TV and film rather than music (absence of stereo on RCA). RCA says that material originally recorded to be sold on vidisc will move on to other media. Trade journals feel that RCA's introduction of the $500 player will trigger marketing decisions on disc and cassette that will bring all prices down - like the early colour TV days. RCA feels that its discs will dominate: the CBS licensing agreement and United Artists' association with MCA are seen as a major endorsement of the Selectavision format.

In general, on the cassette side, many formats inhibit industry growth. RCA is not a major competitor in the VCR market: it has 25 per cent of the market now and hoped to sell 500,000 VCRs in 1979. It predicts that unit sales will grow by 10 per cent in 1980: consumers are reluctant to invest $800-$1,200 in systems which may become obsolete, and are confused over the two tape formats which are not interchangeable.

In August 1977, RCA (New York) entered the VTR market. It forecast that it would have a 20 per cent market share by the end of 1978 and that the market would be 750,000 VTRs in 1978 and 1.25 million in 1979. The 1979 forecast was accurate. The Selectavision vidisc investment is the largest the company has made in a single product, bigger than the $130 million spent developing colour TV in 1954.

RCA earnings for the third consecutive year reached a new high in 1979. Sales topped the $7 billion mark for the first time in company history. Net income rose two per cent to $283.8 million up from $278.4 million.

In 1979, a Drexel Lambert financial analysis report predicted that the RCA videodisc player would hit the market at under $500 in late 1980. With predicted sales of 1.5 million units annually, it would bring profits equal to NBC's contribution. RCA says that by 1990, TV set sales will grow to $10 billion annually; accessories/electronics will climb to $16 billion (including videocassettes, discs, etc.); there will be more vertical integration of equipment companies and programmers.

(c) Sony Family

Sony will begin selling its industrial videodisc player in late 1980 -- and by the time it goes on the market, Sony will be equipped to replicate videodiscs. The company is still examining the three consumer videodisc systems of which it is a licensee. The go-slow attitude had contradicted Sony's initial enthusiasm when it unveiled its Philips-compatible optical/laser videodisc system. Predictions are that during the 1980s the entire video line-up will be Sony's fastest-growing product segment. At the Investment Analysts Society of Chicago, Sony cited video products as one of the major targets of its stepped-up investment in new facilities (about $200 million per year in 1980-82). Sony promises efforts in semi-conductor technology, which is seen as intrinsic to the development of related video, audio and digital technologies.

A budget of around $4 million was spent by Sony Consumer Products Div. N-5, autumn 1978, promoting Betamax. Featuring the SL-8600 model and new products, the campaign was the biggest for a single Sony product. Betamax was promoted as "The great time-shift machine" but the possibility of buying pre-recorded cassettes or of building a library was not promoted. The Beta VCR format is marketed under Sony, Sears Betavision, Sony Betamax and Zenith brand names. By mid 1977, Sony had sold over 50,000 Betamax machines in the U.S. and announced a marketing target of 200,000 unit sales in the U.S. in 1978. In 1978-1979, Sony was considering a switch from Beta to VHS to develop a system superior in tape efficiency to VHS but incompatible with VHS and earlier Betas: the purpose was to cash in on the six hour VHS tape market.

The VHS format, the second format available, provides longer taping capability than Beta. VHS overtook Beta in sales. VHS gained a large proportion of the market for the two years the formats competed, but Beta entered the market one year before VHS, so the number of Betas is about the same as the number of VHSs. Blank tape sales for Beta exceed those for VHS, and Beta sales for 1979 were expected to increase faster (42 per cent) than VHS (33 per cent) because marketing is more aggressive and because of increased tape time of Beta-2. Beta and VHS have introduced three model changes in the last four years to gain an edge on tape length: Beta is now at 4½ hours. Philips is bringing out the V2000 at eight hours (1980). Beta sales declined in 1978 and the decline continues. Beta must also compete with LVRs (Toshiba, BASF) which are cheap (around $500) but with limited features. Beta and VHS can compete with LVR with portable models. In 1980, 600,000 units may be sold.

Betamax was officially launched by Sony in France in September, 1978, with expectations that one per cent (20,000-30,000 homes) of French colour TV set owners would buy a Betamax recorder in 1979. Beta and VHS were expected to split the market half each. About half the 200 Sony video dealers in France are equipped with telecine to transfer Super 8 film to cassette. Prerecorded software will be introduced: about 200 titles in 1978; 2,000 in 1979.

In 1978, Italian state broadcaster RAI placed an order for 233 U-Matics. The order was at least twice as big as all other Sony orders for broadcast U-Matic-H machines put together (1979). Included in the contract were 115 Model BVU-100 portable and 118 Model BVU-200 editing recorders, ancillary equipment and technical training. Machines were to be used at RAI's 21 regional centres.

Other sales of broadcast U-Matics: Czechoslovakia, Finland, France, West Germany, Netherlands, Norway, Switzerland and U.K.

Sony planned to open a manufacturing plant in Brazil: the first outside Japan to manufacture Sony video records as of December, 1978.

During the third quarter of 1978, VTRs accounted for 17 per cent of sales, compared with 14 per cent of the whole fiscal year 1976-77. By 1985, Sony expects 50 per cent of Japanese homes will own a video recorder and by that time, the video sector will constitute 25 per cent of Sony's consolidated sales - after 10 years of marketing. Colour TV took 10 years to achieve 90 per cent penetration in Japan.

(d) Matsushita Family

Matsushita will begin selling its VHD videodisc system worldwide - including the U.S. by end-'81, using EMI software. Matsushita says it is continuing to seek affiliation from hardware manufacturers who haven't yet committed to RCA/Zenith or Philips/MCA/Sony families.

In 1980, Thorn-EMI and JVC are going ahead with disc and disc player production for marketing in Europe and U.S. by end-'81.

JVC sees VCR sales increasing rapidly in the second half of 1980 while the first half will be slow with some consolidation of technology. VHS may develop an equivalent to Betascan. JVC says that 1980 VCR sales should total 600,000 units, up from 500,000, the 1979 figure.

B. SOFTWARE

1. Producers and Distributors for

(a) Philips

In 1980, MCA confirmed plans to release about two dozen titles on VCR format in spring 1980 and these would include recent titles "The Deer Hunter", "Electric Horseman", "1941" and "The Jerk". MCA will set up its own retail distribution system using its record sales personnel to place cassettes in record stores. Bell & Howell and Magnetic Video will handle duplication for MCA with upwards of 100,000 copies of each title expected to be available in the first shipment.

(b) RCA

By 1979, RCA started off by putting together 200 titles: first run feature films, old movies, classic television shows and rock concert performances, plus some educational and instructional programming. The intial catalogue consisted of 50 per cent feature films, maintaining the same proportion in 10 new releases each month for the first year. By the end of 1980, total titles will be 300. In 1980, RCA obtained NBC video disc rights to five NBC specials and 12 Chaplin movies: 90 minute versions of "Victory at Sea", "Heidi" and "Hans Brinker"; two cultural specials, "The Louvre" and "Tut the Boy King", the first shows to move from NBC to RCA's videodisc project. Programs are pressed on separate sides of the same disc. Among the Chaplin movies are: "Gold Rush", "City Lights", "The Great Dictator" and "Modern Times". This deal represents the first business venture for NBC Enterprises Division which will sell, not produce, software (CBS and ABC are planning to sell programming to cable and pay services, to combine home video and cable markets for economic reasons. NBC has no company policy yet on this aspect). RCA feels that the vidisc medium is closer to the record industry and publishing than to commercial broadcasting, i.e., at 500,000 sales, discs are gold; at 1,000,000, they're platinum.

RCA allied itself with CBS: CBS obtained a licence to manufacture vidiscs, using the RCA format, selling for between $15 and $20. Trade journals feel that the RCA-CBS-Zenith deals could sew up the U.S. market with the needle-in groove system, though Magnavision laser technology is more futuristic. With the low-priced discs contrasted to the $30-$40 prerecorded cassettes, RCA could capture a larger share of the video market. Justification comes from the CBS and United Artists endorsement of RCA technology: RCA has rights to use 100 U.S. films for Selectavision, including the Warner Brothers collection owned by U.A.: films from the past 25 years, feature and classic films. RCA made licensing arrangements with: Paramount for 75 titles, plus exploration of development of special programming for vidisc, with Paramount agreeing to add seven new titles yearly; J. Arthur Rank for 20 titles, with Rank receiving $500,000 against a percentage of net sales receipts -- licence extends to U.S. and Canada; 20th Century Fox for 100 titles; MGM for 100 titles; Walt Disney for 16 titles; plus Avco Embassy products and ITC - the latter represents a developing agreement between RCA and Kirshner and ITC to produce a disc from Elton John's Russian tour. Production of original vidisc material depends on union negotiations, and RCA sees discs as distribution forms for stage play recordings. In terms of entertainment series, RCA acquired the first major TV series through licence rights with Paramount for 10 "Star Trek" episodes, plus options on the remaining 69 episodes. The first Selectavision catalogue included two "Star Trek" discs, each disc having two one-hour episodes, or one two-hour episode.

Zenith software: dealers will carry RCA, CBS and other discs and it may arrange licensing for its own catalogue.

In 1980, Magnetic Video may sign a licence for production of RCA Selectavision video discs. Terms are non-exclusive allowing Magnetic Video to pursue deals with MCA to custom press video discs for them.

MGM is considering a deal with CBS to put classic MGM titles into a package of software which CBS will press for its offerings on RCA Selectavision format.

(c) Sony

In 1980, Sony was keeping options open for a capacitance vidisc system: it could become a licensee of RCA technology. Sony has a record making agreement with CBS (as does RCA) so software production for the capacitance vidisc system could be viable.

For tape production, see U-Matic and Betamax description under Hardware.

(d) Matsushita

In 1980, Thorn-EMI Ltd. and JVC agreed to establish a close relationship on a worldwide basis to promote use of JVC's VHD/AHD videodisc system. The companies said they will cooperate in all aspects of disc development. Thorn said the relationship will include building plants to make discs and players in Europe -- with a target introduction date of late 1981. No one will speculate on what effect this will have on JVC's videodisc prospects in the U.S. The late-'81 date is well after the nationwide debut of Selectavision (RCA/Zenith) and the Pioneer/Magnavision formats. Observers suggest this may be JVC's last great hope to push the Matsushita-endorsed technology. Thorn, via its recently acquired EMI operation, has access to immense programming. Some EMI holdings have already been licensed to Selectavision under non-exclusive videodisc rights.

EMI's U.S. subsidiaries include Capital Records, which could serve as a software launching pad for video/music performances. Thorn's relationship with JVC is already well established in marketing the VHS videocassette equipment in Britain. JVC is also believed ready to establish its own foothold in Europe via a takeover of Decca Ltd.'s TV and audio products division.

JVC VHD/AHD capacitance video disc system 1979: discs are standard PVC platters, similar to audio recordings. They sell for about 10 per cent more than stereo records. JVC is in the preliminary stages of getting software production on disc. Capacitance discs are lower priced to produce than optical discs. Mastering is about $500 per side and an entire set-up of mastering equipment would cost about $250,000. It will handle this at its own California plant or license others to do it. Pressing records could be done by any company in the audio recording pressing industry.

In 1979, JVC's British marketing arm was using software promo which worked well in the U.S.: giving away a prerecorded cassette with the purchase of a Vidstar VHS machine. It offers only three films: "Shalako", "Carry on Cowboy" and "25 Year Impressions".

2. Producers and Distributors in General

Agency for Instructional TV

Market: sells instructional programming for schools, 2000 titles.

Producer/Format: One of the largest distributors of prerecorded video programs to educational market, the agency produces 10 per cent of programs it distributes. It is a non-profit American/Canadian organization to strengthen education through TV and other technologies.

Advanced Systems

Market: institutional: data processing, management, sales training personal development - 1,990 titles.

Most Popular: "Data Processing Concepts", "IBM MVS Operating System Series", "Manufacturing Resources Planning".

Producer/Format: produces 60 per cent of its programs. Titles are available for sale or rent on Beta and $\frac{3}{4}$ inch format. Advanced Systems is world's largest producer and distributor of video assisted instruction. Programs are supplemented by text to provide skills training for business, industrial or government organizations.

Allied Artists Video

Market: home video only, 101 titles.

Most Popular: "Story of O", "The Betsy", "Papillon".

Producer/Format: 500 stores carry AA programs on Beta and VHS; it does not sell directly to public; it has offered movies on videotape since 1978 and it is one of the largest distributors of prerecorded programming. Lorimar bought AA after AA went bankrupt. Programmes are duplicated by Bell & Howell. The Lorimar deal includes Allied Artists Video Corp. (software distributor) as well as Allied Artists Pictures, Allied Artists Television, a $7 million deal.

American Cable Network

Market: educational, sponsored films on video tape, 500 titles.

Producer/Format: sells on Beta and $\frac{3}{4}$ inch formats only; it offers tapes that cover areas such as history, archaeology, driver education and social studies.

American Educational Films

Market: sales and management training - science, health, safety - 150 titles.

Most Popular: "Common Sense, Self-Defense", "CPR Training", "First Aid Quiz I".

Producer/Format: sells and rents to business, schools, libraries on ½ inch and ¾ inch formats; it produces about half the programs it distributes. It sells programs in 16 mm. format. Video business had doubled in 1979; AEF is searching for new material from corporate and public agency program producers.

American Hospital Association

Market: educational, 31 titles.

Most Popular: "Environmental Safety Issues", etc.

Producer/Format: sells and rents educational programs to hospitals on ¾ inch and 16 mm. formats.

Astronics

Market: home video: movies, X-rated films, made-for-home video specials, rock concerts - 500 titles.

Most Popular: "Secrets", "Babyface", "Lasermusic".

Producer/Format: sells direct to public and at over 300 retail stores; it distributes programs from Media Home Entertainment, Nostalgia Merchant, TVX, International Home Video Club, Magnetic Video, Allied Artists, VCX, Sports World Cinema and Arrow Films. Astronics produces its own material ("Lasermusic") and a video magazine. Programs sold in Europe and South America are on PAL format.

Audio-Video Productions

Market: home video: movies, X-rated films, public domain material, old TV shows - 600 titles.

Most Popular: "Sound of Music", "Inside Jennifer Welles", "Sex World", "Barbara Broadcast".

Producer/Format: sells directly to the consumer and through 15 stores; it distributes programs from Magnetic Video, Video Communications, Video-X Home Library, Coast Sales.

Auroscope

Market: instructional music programs for home and institutional video markets - 10 titles.

Producer/Format: series of 10 lessons, each costing $45.

BFA Educational Media

Market: educational: kindergarten to college - 1,300 titles.

Producer/Format: videotape programs are a small part of revenues.

Blackhawk Video

Market: home video: movies, cartoons - 303 titles.

Most Popular: "Bruce Lee, Superdragon", "Sound of Music", "Phantom", "The Sky King".

Producer/Format: over 500 outlets carry Blackhawk programs; consumers can buy via mail order directly. Programs are from Magnetic Video, Allied Artists, Nostalgia Merchant and it produces its own programs. It has 50 years' experience as a major distributor of films to the home market.

Blue Sky Productions

Market: educational.

Most Popular: "Look What We've Done to this Land", "Rio Grande".

Producer/Format: produce all programs they distribute; they sell and rent on ¾ inch to colleges, schools, libraries. Title areas include ethnic heritage, culture and the environment of Southwest U.S.

BNA Communications

Market: management development, sales training, etc. - 177 titles.

Most Popular: "The Manager and the Organization", etc.

Producer/Format: sells and rents on Beta, VHS and ¾ inch formats to business, industry, government, college.

Brenda's Movie House

Market: home video: feature films, X-rated movies, concerts, sports, "how to" and old TV shows - 400 titles.

Most Popular: "Flesh Gordon", "King Kong".

Producer/Format: sells to consumers by mail order only; it distributes programs from Magnetic Video, Allied Artists, Nostalgia Merchant, etc.

Brentwood Video

Market: home video: male X-rated movies - 8 titles.

Most Popular: "The Best of Brentwood", "This is Brentwood", "Eureka Bound".

Producer/Format: it has been in Super-8 business for 8 years and offers short subject gay films available on VHS and Beta formats. The shows are produced by Brentwood.

Brigham Young University

Market: religious and educational: colleges and hospitals - 63 titles.

Most Popular: "Cipher in the Snow", "Johnny Bingo", "John Baker's Lost Race".

Producer/Format: sells on $\frac{3}{4}$ inch and 16 mm. Film is their big seller; it produces 90 per cent of programs.

Cable Films

Market: home and institutional; public domain movies - 150 titles.

Most Popular: westerns, classics, mysteries.

Producer/Format: sells on all formats to CATV, direct to consumer and eleven retail outlets; it distributes programs to overseas markets and is a principle supplier to CATV.

Calvista

Market: X-ratedflicks: home video.

Distributor/Format: Calvista is one of the top three producers of X-rated tapes; it claims to have been approached by HBO to supply software but HBO denies this, and it claims that a very conservative estimate of the number of adult tapes sold in 1979 would be 960,000 to 1.4 million, based on Calvista's estimate of 8,000 retailers selling 10-15 adult titles each month.

Caravatt Communications

Market: sales, educational - 17 titles.

Most Popular: "You and Your Infant", "A Conversation with David Ogilvy", etc.

Producer/Format: sells and rents on all formats to colleges, libraries, business; its goal is to bring the same kind of variety found in print publishing to video publishing in terms of titles offered and special audiences reached. Its main titles are instruction, general information.

Career Information Centre

Market: educational: schools and colleges - 50 titles.

Producer/Format: produces and sells career information programs on engineering, special education and science.

CBS Video Enterprises (Also see RCA software)

Market: home video: cable/pay TV markets.

Distributor/Format etc.: Cy Leslie, the founder and former chairman of Pickwick International, heads CBS video; it plans to use CBS Records' artists for new video productions.

Champions on Film

Market: home video: institutional, sports - 35 titles.

Most Popular: swimming, tennis, volleyball.

Producer/Format: a division of School-Tech. it has 25 years of experience in sports instruction; it offers VHS, Beta, $\frac{3}{4}$ inch, 16 mm. formats and sells directly to the public and through 150 stores; it produces 10 of the 35 titles; programs are distributed overseas via Ealing Corp.

Chrysalis Records

Market: audio record distribution: moving toward home video and cable markets.

Producer/Format: in late 1979, Chrysalis had commissioned Jon Roseman Productions to tape the 12-song Blondie LP, "Eat to the Beat", shot on location and sound stages in N.Y.; Chrysalis and Blondie will split profits after the $100,000 production cost is recouped.

Cinema Concepts

Market: home video: movies, cartoons, sports, old TV shows - 80 titles.

Most Popular: "The Golden Age of Comedy", "Journey into Beyond", "Dynamite Chicken".

Producer/Format: it's a small business dealing in prerecorded videotapes; affiliated with Home Cinema Service and offers X-rated films.

Cinema Resources

Market: home video: movies, old TV shows, cartoons - 400 titles.

Most Popular: "King Kong", "Swing Time", "The Oldest Profession".

Producer/Format: sells directly to public by mail; it carries programs of Nostalgia Merchant, Magnetic Video, Blackhawk films, Allied Artists, Niles Cinema, Video Warehouse, Cinema Concepts; it plans to release exclusive titles and specializes in classic films - old RKO films.

Columbia Pictures Home Entertainment

At the CES, Summer 1979 Columbia made its debut into pre-recorded cassettes. Prices: \$59.95 for current films and blockbusters and \$49.95 for classics; it expects to add two more shows per month during spring, including "Emmanuel", "Midnight Express", "Eyes of Laura Mars" and "Taxi Driver". In 1980 it expects to stock 650 titles and expects pornos to represent 20-22 per cent of an anticipated \$150,000 in tape sales.

Covenant Press Video

Market: Bible studies, sermons on videotapes - 120 titles.

Most Popular: "Charismatic Speaks on the Holy Spirit", etc.

Producer/Format: founded by the Evangelical Covenant Church of America, it sells and rents 150 tapes per month on ½ and ¾ inch formats and produces all of its programs.

Creative Media

Market: Sales and management training - 15 titles.

Most Popular: "Keep Reaching: The Power of High Expectations", etc.

Producer/Format: rents and sells programs on ¾ inch to business, large corporations, colleges.

DeMaio Video

Market: home video: movies, public domain features, concerts.

Producer/Format: mail order house; it sells programs from Magnetic Video, Allied Artists, Nostalgia Merchant, Media Home Entertainment, Niles Cinema, Cinema Concepts; it restores classic features and shorts. Programs are also sold in Japan.

Discotronics

Market: home video: movies, X-rated, concerts - 600 titles.

Most Popular: "Flesh Gordon", "Groove Tube", "Patton".

Producer/Format: sells programs from Magnetic Video, Allied Artists, Media Home Entertainment, X-rated program distributors; it has an active videocassette exchange service. It claims most customers want to see films, not collect them.

Discount Video Tapes

Market: home video: movies, concerts, old TV shows, public domain titles - 400 titles.

Most Popular: "The Beatles at Shea Stadium", "Magical Mystery Tour", "Amos n' Andy".

Producer/Format: sells mail order from Magnetic Video, Nostalgia Merchant, Hollywood Film Exchange, Video Unlimited.

Downtown Community TV Centre

Market: documentaries - 4 titles.

Most Popular: "Vietnam: Picking Up the Pieces", etc.

Producer/Format: producer of quality documentaries that have been broadcast by PBS; the programs are available for rent or sale on various video formats; it serves local community by producing programs about local issues and trains residents in use of video equipment.

Education Development Centre

Market: educational - 3 video tapes - 200 films.

Most Popular: "I Shall Moulder Before I Shall be Taken", etc.

Producer/Format: a publicly supported non-profit corporation it is involved in educational research and development; it distributes films and publications produced at EDC.

Educational TV Centre

Market: educational - 40 titles.

Most Popular: "American Family", etc.

Producer/Format: a part of Cornell University it sells and rents programs on VHS, $\frac{3}{4}$ inch and 16 mm. formats; it produces all programs it distributes.

Electronics Arts Intermix

Market: home and institutional: video art.

Most Popular: "Video Weavings", "Scape-Mates", etc.

Producer/Format: a premier distributor of video art, EAI is now producing programs for home video but not in retail stores yet; tapes may be purchased or rented. Its customers are colleges, libraries, museums, CATV. Programs are available in Japan, England, France and Italy.

Electronic University

Market: educational: host is Alan Watts - 12 titles.

Producer/Format: sells and rents "The Essential Lecture Series" with Alan Watts - Beta, VHS, $\frac{3}{4}$ inch formats; series includes "Man in Nature". Series may be rented for two weeks at $350; it also distributes Watts' audio material: the "Essence of Buddhism" series.

EMI

Producer/Format: Thorn-EMI are involved in disc production for the Matsushita/JVC videodisc system (1980); some EMI holdings have been licensed to RCA Selectavision under non-exclusive video disc rights. It has access to Capital Records and Decca Ltd., and is one of the world's largest producers/distributors.

Emory Medical TV Network

Market: continuing medical education - 400 titles.

Producer/Format: rents and sells programs on Beta, VHS, $\frac{3}{4}$ inch formats to hospitals, medical schools, nursing schools, private doctors; some tapes are used by rural physicians with home VCRs; it produces all of its programs.

Entertainment Video Releasing

Market: home video: G-rated to X-rated - 150 titles.

Most Popular: "Sometime Sweet Susan", "Memories with Mrs. Aggie", "1001 Danish Delights".

Producer/Format: in business since 1977 - longer than almost any company in this area; had a legal battle with its duplicator, Video Warehouse; Screw magazine says EVR has a reputation for shadiness; EVR continues to grow with mainly Grade B programs; no information on how many stores retail their programs.

Exec-U-Service

Market: management and sales training - 20 titles.

Most Popular: "Motivation Goes Both Ways", etc.

Producer/Format: delivers programs to clients; supports tapes with seminars and tailor-made programs; sells and rents programs on VHS, Beta and $\frac{3}{4}$ inch formats; it produces half of the programs it offers.

Film and Video Entertainment

Market: home video: movies, old TV shows - 100 titles.

Most Popular: "Star Trek Bloopers", "Star Trek" episodes and the "Lone Ranger" series.

Producer/Format: formerly Syndicate Films, Inc.; in 1978 it offered mostly cowboy films; in 1979 it added 35 public domain titles and programs for rent or sale on mail order; some tapes sold in England, Japan and South America.

Fotomat

Market: home video: first national rental club with 130 titles in December, 1979 and 160 titles in 1980.

Producer/Format:

In mid 1979 Fotomat started renting prerecorded videocassettes following its success with amateur tape-to-film transfers. It entered into a three-year, non-exclusive contract with Paramount Pictures which supplies some titles already on Discovision disc. Titles included: "Godfather", "Saturday Night Fever", "Looking for Mr. Goodbar" ($7.95-$13.95 weekly, compared to purchase at $60). VHS and Beta formats are offered. Fotomat acquired home video rights to titles from American Film Theatre, the Ely Landau Series of filmed stageplays.

In December 1979 Fotomat became the first national rental club: nationwide program to rent movies on cassette to owners of VTRs. Customers phone a toll-free number and reserve a specific title to be picked up the next day at one of Fotomat's 3,700 photoprocessing units.

In 1980 Fotomat and Sam Goody (owned by American Can) decided to steer clear of the X-rated market. Fotomat and WCI Home Video developed a non-exclusive program supply deal for sales only. WCI Home Video is a Warner Communications Inc. division - developing and marketing programming for video tape and video disc. Fotomat will sell WCI titles through the "Drive Thru Movies" catalogue. Titles include "Superman", "Blazing Saddles", "Dirty Harry", "The Exorcist", "Oh God", "Hooper", "The In Laws", "All the President's Men", "Bugs Bunny/Road Runner Movie" and "Deliverance". Prices are from $49.95 to $69.95. The deal with Warner/WCI included "10" for purchase in April, 1980. Other releases are "The Warriors", "Sunburn", "Bloodline" from Paramount and independently produced "Secrets", also "Prophecy", "The Players" and "Hurricane" from Paramount.

Fotomat/Disney deal in March 1980: the Disney release of a rental library via Fotomat with test markets in Philadelphia, Chicago, Houston, San Francisco, will have national distribution by September, 1980. Titles include "The Love Bug", "The Absent-Minded Professor", etc. (13 titles) plus three 45-minute cartoons. Rental rates for feature films, $9.95-$13.95, for cartoons, $7.95 - $9.95, for 5-day rental. Fotomat will share revenues with Disney.

In June 1980 new titles included "The Prophecy", "Oh God", (sale only), "Tribute to Billie Holliday", "All Star Swing Festival", 10 episodes of "Star Trek" (TV version), concerts of John Davidson, Yvonne Elliman, Hall & Oates, Dionne Warwick.

In mid 1979 "Drive Thru" movie rentals were offered in Los Angeles and San Diego, with ad campaigns describing how VCR owners could rent or buy the original 43 movies and six sport tapes in the catalog, which includes plugs for other Fotomat video services, sales of blank tapes, home movie and slide duplication. Fotomat stressed rental charges through VISA or Master Charge. The customer gets a Fotomat Drive-Thru Movie Pass with personal ID number and gives the ID number when s/he orders, and rentals can be charged directly to the account.

In December 1979 "Drive Thru Movies" went nationwide: Fotomat aimed for a first year gross of $15-$20 million.

In 1980 Fotomat ran its first video disc ad in Dallas: a premature campaign, the market is too small, though by late 1980, disc sales are expected to pick up. It reports promising response to Disney features in four test markets with sales generated from publicity campaign showing a large "Mickey Mouse". It plans a large ad campaign in excess of the $1 million spent in 20 days in December 1979 to launch the "Drive Thru Movies" campaign. It claims it will have the third or fourth largest ad budget in the disc/cassette market. Ads to sell "Grease", for instance, will sell machines and this will mean more rentals. In Spring 1980 Fotomat says sales have been "softer" than December/January and it starts promotional ads and pricing tests in June.

Freeway Video

Market: home video: X-rated movies - 10 titles.

Most popular: "China Cat", "Hard Soap", "Jade Pussy Cat".

Producer/Format: sells directly to retail store; no mail orders.

Fuji

At the CES, Winter 1980 Fuji offered new head-cleaning cassettes priced at $25 for VHS blank format and $18.50 for Beta blank format.

Great Plains National

Market: educational - 3,000 titles.

Producer/Format: key distributor of video tapes to educational market; it sells and rents programs in Beta, VHS, $\frac{3}{4}$ inch formates and is a distributor only.

Halebrooke Corp.

Most Popular: "The Lee Dubois Course in Selling Techniques", etc.

Producer/Format: small distributor/producer of tapes for corporations and government clients; Beta, VHS, $\frac{3}{4}$ inch formats are offered.

Holland Video

Market: home video: public domain movies, bloopers, cartoons, old TV shows, concerts - 15 titles.

Most Popular: "Happy Days" out-takes, "Incredible Bloopers", movie trailers.

Producer/Format: mail order sales only; offers "Tranquility", a computer animation tape produced for HV.

Hollywood Film Exchange

Market: home video: movies, cartoons, documentaries, rock concerts - 200 titles.

Most Popular: "Dark Star", Warner Bros. Cartoon Festivals and "Gorgo".

Producer/Format: programs available by mail order, over the counter, and at 100 other stores that sell HFE products; programs are from Magnetic Video, Allied Artists, Nostalgia Merchant, Media Home Entertainment, Video Tape Network. Programs are sold in Canada, Mexico, South America and Japan. Most of the catalogue is public domain; it has acquired R-rated motorcycle flicks.

Home Cinema Service

Market: home video: X-rated movies - 10 titles.

Most popular: "Supervixens", "Lickerish Quartet", "Best of Midnight Blue".

Producer/Format: one of the first distributors of X-rated video; it features movies of Russ Meyer and portions of the CATV show "Midnight Blue"; its tapes are sold in 60 stores.

Home Entertainment Network: see Select Video

Home Theatre Movies

Market: home video: movies, concerts, 'how to', home video specials - 100 titles.

Most Popular: "Ice Fantasy", "Bordello" plus disco dance lessons.

Producer/Format: has specialized in rock-oriented movies such as "The London Rock 'n Roll Show" and "Volunteer Jam" starring The Charlie Daniels Band with Marshall Tucker Band and lots of Grade B such as "Delinquent School Girls". It has begun distributing programs produced for the home video market including Las Vegas shows. Tapes can be bought directly from HTM or from over 100 stores.

Intercollegiate Video Clearing House

Market: Sales and management training, home economics, etc. - 221 titles.

Most Popular: "Human Behavior in Business", etc.

Producer/Format: non-profit videotape distributor mainly to academia. sold on Beta, VHS and ¾ inch formats.

Intermagnetics Corp.

It plans to build its first video tape factory in the U.S. and is also building a video tape plant with a Japanese firm and construction or licensing of additional video tape facilities in other countries. In its first venture into videotapes it plans to sell its own video tape brand through its existing audio tape retail routes and make private label tapes for other firms.

International Home Entertainment

Market: home video: movies, X-rated films - 250 titles.

Most Popular: "Deep Throat", "Devil in Miss Jones", "Behind the Green Door".

Producer/Format: claims to be the exclusive distributor of "Deep Throat", etc.; it offers tapes from Magnetic Video, TVX, Astronics, Channel X and the Mitchell Bros.; flicks can be bought via the mail order division of the IHV Club. It also sells an audiotape of the Guyana mass suicide.

Intervision Video

Market: European home video: movies, rock concerts, how to - 300 titles.

Most Popular: "Silent Night, Bloody Night", "The Happy Hooker", music shows.

Producer/Format: London-based distributor; it sells and rents to English customers offering current rock tapes, e.g. Robert Gordon with Link Wray, and The Boomtown Rats. It does its own duplicating, and programs are retailed in 70 stores or bought directly from IV.

ITV Centre

Market: College credit telecourses - 300 titles.

Producer/Format: the Dallas County Community College District ITV Centre produces and distributes college credit telecourses on ¾ inch to colleges and libraries.

Kapco Communications

Market: home video: disco lessons, comedy show; also sells sales training programs to the institutional video market; four titles for home video; material is custom-made for clients.

Most Popular: disco dancing lessons.

Producer/Format: this production company is going into software; all programs are Kapco produced; it will expand into the home video market. Tapes bought directly from Kapco.

Karol Media

Market: educational - 750 titles.

Producer/Format: distributor of 16 mm. free-loan films; some programs for rent or sale on $\frac{3}{4}$ inch.

Kay Nostalgics

Market: home video: public domain movies, rock concerts, cartoons, old TV shows.

Most Popular: "Amos 'N Andy".

Producer/Format: sells mail order only, on $\frac{1}{2}$ inch formats.

Learning Publications

Market: training - 2 titles.

Producer/Format: a division of The Video Picture Company, a Boston production facility, it sells tapes in training series and was formed in 1978.

Magnetic Video Corp.

Market: home video: movies, wild life tapes and management training; titles included about 140 home video and about 10 educational in 1979. It is tied in with 20th Century Fox and Video Club of America and offers 250 titles in 1980.

Most Popular: "The Sound of Music", "Mash", "Patton".

Producer/Format: MVC is the world's leading distributor of prerecorded home video software. In 1977, Magnetic Video signed a contract for distribution of 20th Century Fox movies on video tape; programs were sold at 4,410 outlets in 1979. It also distributes from Viacom, Avco Embassy, BBC Films (Charlie Chaplin movies), Brut Productions, Bill Burrud Productions (wildlife) and Pathé News (old newsreels).

Magnetic Video (Cont'd)

20th Century Fox

Magnetic Video ——→ Video Club of America (VCR distributing)
(subsidiary)

In April, MVC will issue Video Enterprises' (ABC) "Highlights from 1976 Winter & Summer Olympic" tapes. By the end of 1979 there were 200 titles in Video Club of America in Beta-2 and VHS formats. In 1980, with Viacom, MVC distributed the first made-for video programming: a dance instruction package, "Watch Your Step". It handles duplications of VCR titles for MCA.

VCA announced March, 1980 releases, "Superman" and "Exorcist" among them. VCA now offers nearly 250 selections and is accepting advance orders for "10". The best seller list of January 1980 offered five MVC/20th Century Fox titles including the new "Towering Inferno" in seventh place (13 movies). MVC extended its previously negotiated deal with Viacom Enterprises and struck up a new deal with ITC Entertainment: MVC acquired exclusive rights (world wide video cassette, vidisc) to the ITC film library, except England and the RCA Selectavision format (64 movies).

MVC educational offerings include "An Interview with Dustin Hoffman", a three-part, two-hour conversation about the making of "Kramer vs Kramer" from the University of Southern California film symposium. MVC says this is the pioneer effort in film education classes, produced and distributed by MVC.

Warner and Paramount are at the top of the bestseller list but MVC says it will be on top again with the release of "Norma Rae", "Breaking Away" and "The Muppet Movie" shipped to dealers May 1, 1980.

There are rumours of an MVC/RCA licence for production of RCA Selectavision video discs but RCA denies this though MVC says that licensing terms will be non-exclusive.

February bestsellers included "Mash", "Sound of Music", "Patton", "Omen", "Silver Streak", "Butch Cassidy", "Towering Inferno", "African Queen", "The Producers" and "The Graduate". MVC released 12 titles in May, and eight more in June. It will bring out "Sleuth", "Heartbreak Kid", "Old Boy Friends" (Avco), "Two for the Road", "Room at the Top", "No Business like Show Business", "Circle of Iron" and two sport features: golf and tennis lessions with Nicklaus and King.

Distribution/Marketing:

MVC sells programs in Canada, England, Venezuela, Sweden and Hong Kong. The Commercial Products Division produces and distributes 10 motivational and self-enrichment programs for the institutional video market. By March 1980, with limited tests of cassette sales in theatre lobbies, MVC was going ahead with about a half dozen theatres using pilfer-proof cases. Popcorn stand attendants sell cassettes via VISA/ Master Charge. MVC plans to expand into other theatre chains (started with Plitt and UA theatres) with standard older titles from the MVC catalog and possible day/date release movies. MVC's Video Club of America is sending several thousand of its 50,000 members a cassette-of-the-month mailing, plus updated catalogs and is considering negative option marketing, a book and record club approach. It will try this when the video club has at least 200,000 members. Sports cassettes and "how tos" are not selling well but MVC says this market will develop as people discover education can be entertaining. The Bill Burrud animal and wildlife series is the most successful of non-entertainment programming. For the 1976 Winter/Summer Olympics tapes, MVC will use posters and local newspaper ads with dealers to promote the games. MVC notes that 15 per cent of the VCR population is in the Los Angeles area and 11 per cent in metro New York, as opposed to only seven per cent in New England. Advertising is more effective in high density VCR markets.

At the CES, 1979, MVC and Allied Artists were the only software sellers in the straight market. The 1979 MVC catalog had 47 new titles. MVC only wants to sell cassettes, not rent them: a $54.95 list price for a typical two-hour movie. Previous efforts to drop prices $5 were ignored by dealers who feared a margin loss (compare with Paramount, $60 and WCI, $55-$60).

March of Dimes

Market: Public health information/education - 16 titles.

Most Popular: "Alcohol: Crisis for the Unborn", etc.

Producer/Format: operates on a free-loan basis offering programs on ¾ inch and 16 mm. Tapes are produced by MD.

Martha Stuart Communications

Market: management training/education - 37 titles.

Most Popular: "Women who have had an Abortion", etc.

Producer/Format: sells and rents in ¾ inch and 16 mm.; programs are produced by TV producer, Martha Stuart.

Maryland Centre for Public Broadcasting

Market: college credit telecourses, consumer education, historical drams, "how to" - 150 titles.

Most Popular: "Wall Street Week", "Consumer Survival Kit", "Of Earth and Man".

Producer/Format: sells and rents programs on Beta, VHS, ¾ inch formats; programs are produced at the Centre or other public TV stations.

Maxell

At the CES, Winter 1980, Maxell showed its 'HG' line of epitaxial cassettes priced five to six per cent higher than its standard blank tapes.

Media Bus

Market: documentaries and video art - 11 titles.

Producer/Format: video production/distribution formed over nine years ago as Videofreex. Programs include "Seabrook Calling", "World's Smallest TV Station". It's a non-profit organization and offers production and post-production services to artists and producers on Beta, VHS, ¾ inch formats. Each tape costs about $99.

Media Home Entertainment

Market: home video: movies, rock concerts, soft X-rated tapes, cartoons - 70 titles.

Most Popular: "Alice in Wonderland", "Flesh Gordon", "Groove Tube", "Heat", "Clowns".

Producer/Format: highly creative programmer of tapes to the home video market; offers exclusives on cult films, e.g. "Flesh Gordon", "The Point" and Andy Warhol's "Heat". East coast distribution is a bit weak and programs can be purchased directly from the Los Angeles office or at 250 retail outlets.

Media Works of Arizona

Market: training tapes on AV and video production - four titles.

Most Popular: "Getting it on Video" Parts I and II and "Sound: Recording and Reproduction".

Producer/Format: produces all the programs it distributes on Beta, VHS and ¾ inch formats. Programs are designed for video/audio college, high school, corporations courses and they may expand their library to meet technical program demand in the home video market.

Memorex

At the CES, Summer 1979, Memorex showed its new VHS blank cassettes (T-60, T-120) with Beta cassettes to follow.

Modern Talking Picture Service

Market: free-loan educational - 6,500 titles.

Producer/Format: world's largest distributor of sponsored video - cassettes and films; topics include sports, travel, sales training, home economics and ecology.

MTI Teleprograms

Market: criminal justice education - 200 titles.

Producer/Format: one of the leading distributors of programs for law enforcement; MTI produce half the programs they distribute on ¾ inch and 16 mm. formats.

NASA

Market: aeronautics, space, astronomy, energy, science - 117 titles.

Most Popular: "Apollo 16, Nothing So Hidden", "Who's Out There", etc.

Producer/Format: titles available free to broadcasters, cablecasters, educators.

National AV Centre

Market: information, education - 11,000 titles.

Producer/Format: all programs are produced by United States government agencies. Programs are for sale or rent on all video formats as well as 16 mm.

National Film Board of Canada

Market: educational, social science, sports, management training, visual arts - 500 titles.

Most Popular: "Sand Castle", "Paddle to the Sea", "The Rise and Fall of the Great Lakes".

Producer/Format: 16 mm. and $\frac{3}{4}$ inch videotape; sold or rented worldwide.

National Video Group "Video Society"

Producer/Format: "Video Society" is a sales system under which retailers deliver prerecorded cassettes to Society members; membership costs $69.95, including $70 worth of video credits to members (1980).

NBC Enterprises Division (see RCA software)

Nebulae Productions

Market: home video and institutional; anti-stress and mood tapes - 14 titles.

Most Popular: "Flowing Falls", "Flowing Sea", "Afternoon Delight".

Producer/Format: Nebulae's programming name is "Video Wallpaper"; it offers relaxing programming. Each Beta or VHS tape costs $60; users buy directly from Nebulae and retail distribution is on the way in 20 stores.

The Nickelodeon

Market: home video: movies, concerts, cartoons, X-rated films - 500 titles.

Producer/Format: a Los Angeles retailer, it sells over the counter and by mail order; it sells wholesale to Southern California retail stores. It carries Allied Arts, Magnetic Video, Nostalgia Merchant, Reel Images, Media Home Entertainment, Home Theatre Movies, and porn distributors' material.

Nightingale-Conant

Market: management and sales training - seven titles, plus 450 TV episodes of the Earl Nightingale TV series.

Most Popular: "The Strongest Secret", etc.

Producer/Format: it offers prerecorded audio cassettes and syndicated radio programs. Video, TV features and films are offshoots. Video is available for rent or sale on most formats to cable TV and corporations.

Niles Cinema

Market: home video: movies, rock concerts, cartoons - 400 titles.

Most Popular: "Schizo", "Harrad Experiment", "Horror Express".

Producer/Format: one of the leaders in distribution of Super 8 and 16 mm. films to the home market, it carries Magnetic Video, Allied Artists, Nostalgia Merchant, Video Communications Inc., Video Tape Network, Media Home Entertainment, Home Theatre Movies; four exclusives: "Schizo", "The Harrad Experiment", "Love All Summer" and "I Wonder Who's Killing Her Now". All Niles public domain titles are available to foreign markets. Programs can be purchased directly or at 150 stores that sell the Niles library.

The Nostalgia Merchant

Market: home video - 153 titles.

Most Popular: "Gorgo", "Elvis's Golden Days", "Elvis's Comback Show".

Producer/Format: a top distributor of prerecorded video tapes (just behind Magnetic Video and Allied Artists); it has rights to over 500 programs from companies such as RKO, National Telefilm Associates and the Wrather Corp. Users can buy by mail order from NM or from over 500 stores.

NUS Corp.

Market: training nuclear plant personnel - 243 titles.

Most Popular: "Maintenance Safety", etc.

Producer/Format: programs can be rented or bought on Beta, VHS or $\frac{3}{4}$ inch formats, and 16 mm.; cost: five-tape series goes for $4,800; all programs are produced by NUS. It doesn't sell "The China Syndrome".

Organizational Dynamics

Market: Management training - 10 titles.

Most Popular: "Time Management", etc.

Producer/Format: the 10 part series "Management for Productivity", is a 30 hour in house training program; the series produced by O D is sold on Beta, VHS, $\frac{3}{4}$ inch and 16 mm. formats.

Overseas Tele-Video

Market: institutional and hotel markets outside the U.S., news, sports, entertainment; programs are added weekly.

Most Popular: sports.

Producer/Format: formed in March 1979, OTV provided U.S. programmes to expatriate communities; it leases programs on a weekly basis in any video format to large U.S. corporations with overseas staffs; exclusively carries "ABC World News Tonight", "NBC Sports World", highlights of Major League Baseball, sports programs from Trans World International, feature films from Schick Sunn Classics, NFL Football and made-for-TV movies.

Pacific Labs

Market: home video - 200 titles.

Most Popular: westerns.

Producer/Format: mail order only; offers films from Nostalgia Merchant and Magnetic Video; specializes in providing hardware and software to film collectors.

Paramount

Gulf/Western
|
Paramount - Leisure Times Group
- Simon & Schuster

Market: film theatres: home video

Distributor/Format: most Paramount titles are in the $60 range ($80 for two-tape movies); in 1980, Paramount added 10 titles to the lineup to bring the total to 46 including PG and R versions of "Saturday Night Fever" which accounted for 10 per cent of all Paramount sales - topping the list, followed by "Godfathers I and II", "King Kong", "China Town" and "Barbarella". The new lineup includes "Bloodline", "Grease" "Heaven Can Wait", "The Duelists", "First Love", "Stalag 17" and "The Man Who Shot Liberty Valence" on video cassette.

Penn. State U. AV Services

Market: educational - 110 titles.

Most Popular: "The Faces of A-Wing", etc.

Producer/Format: all programs are produced by Penn. State U.; categories include animal behavior, anthropology, history, health and aging. Users can buy or rent on $\frac{3}{4}$ inch and 16 mm.

Perennial Education

Market: educational - 112 titles.

Most Popular: "Human Growth", "Vegetable Gardening", etc.

Producer/Format: distribute programs about health, sex education, gardening, family planning, child birth. It sells and rents to schools, libraries, TV and industry on all formats.

Portable Channel

Market: educational, cultural - 30 titles.

Producer/Format: users can rent or buy $\frac{3}{4}$ inch and $\frac{1}{2}$ inch reel-to-reel formats. All programs are produced by this non-profit community video facility which offers workshops in all video aspects.

Professional Research Inc.

Market: educational: doctors, patients, dentists, etc. - 300 titles.

Most Popular: "Diabetes in Adults", etc.

Producer/Format: formerly American Video Network, it sells and rents material to doctors et alii. Programs are produced in house and are available on Beta, VHS, $\frac{3}{4}$ inch and 16 mm. formats.

The Public Television Library

Market: documentary and educational - 2,500 titles.

Producer/Format: PTL was established in 1974 in response to requests from educators, industry reps and librarians who wanted to buy or rent programs broadcast on public television; all programs of PTL are produced by U.S. public television stations and are available for sale on $\frac{3}{4}$ inch, Beta and VHS formats and available for rent on $\frac{3}{4}$ inch.

Pyramid Film and Video

Market: educational and documentary - 470 titles.

Most Popular: "Who are the Debolts", "Powers of Ten", "New Breath of Life".

Producer/Format: Pyramid sells and rents to schools, libraries, business and industry, government, medical institutions, foreign markets; produces 15 per cent of programs it distributes. Topics include health, safety, film-making techniques, animation, motivational material. Material is available on Beta, VHS, $\frac{3}{4}$ inch and 16 mm. Pyramid feels that home video is the market of the future.

Quality X Video Cassette

Market: home video: X-rated movies - 61 titles.

Most Popular: "Misty Beethoven", "Maraschino Cherry", "Take Off".

Producer/Format: considered one of the best video distributors of X-rated films; distributes films from Cosmos Releasing, independent producers and Mature Pictures, the parent company of Quality X. Use of PAL equipment will top the European market; Japan and Venezuela are foreign markets now.

Radio Rentals Britain

Britain's first ever home videogram is produced by Michael Barrett Ltd. and offers one title, "New Life in the Garden", marketed for sale or hire.

Red Fox Video

Market: home video: movies, old TV shows, cartoons, sports - 600 titles.

Most Popular: "Gorgo", "Elvis's Golden Days", "Elvis's Comeback Show".

Producer/Format: Red Fox has a showroom in Pennsylvania where it sells soft and hardware but most business is mail order. It offers programs from Magnetic Video, Allied Artists, Nostalgia Merchant, Video Warehouse, Video Communications Inc. and 40 public domain titles. It also sells Super 8 titles.

Reel Images

Market: home video: movies, old TV shows, concerts, cartoons - 400 titles.

Most Popular: "Amos 'n Andy", Colgate Comedy Hour".

Producer/Format: distributes programs from Magnetic Video, Nostalgia Merchant, Niles, Cinema Concepts, Sports World Cinema, plus its own line of public domain films and TV shows.

Regie Cassette - Locatel

Market: home video in France: cassette rentals - 50 feature film titles.

Producer/Format:

In 1979, producer Yves Rousset - Rouard and France's leading television receiver-rental network Locatel formed this company. Fifty feature films are available on video cassette at multiple distribution points throughout France; Rousset-Rouard joined with Philippe Dormay of Eclair Lab. Co. and Gerard Calderon of Sofet-Sofidi, the leading film finance bank pool in a company called Regie Cassette. Rental fees are between $11 and $16 per picture for a four-day period. Locatel has 1,000 TV set rental outlets and is going into the cassette rental business; Rousset-Rouard is President of Trinacra, an independent production company.

Distribution/Marketing:

According to French tax legislation a much higher (33%) rate is applied to video cassette sales than that (17%) to which rentals are subject. This would set cassette prices at about $110 - very high. Thus the drive to cassette rentals. Rental fees for four days will just about equal the price of four cinema tickets. Cassette rentals will start at the top of Locatel's 1,000 outlets. Many sales points are small counters in chain stores, supermarkets and department stores. Rousset-Rouard and partners have another company name: Regie Disque, plus Video Encyclopaedie which will deal with non-theatrical productions for cassette rental. These could convert to cassette sales through Locatel, direct mail, disc shops and supermarkets.

Round Table Films

Market: sales and management training - 65 titles.

Most Popular: "Patterns for Instruction", etc.

Producer/Format: sells and rents on Beta, VHS, ¾ inch and 16 mm.; customers are colleges, corporations, etc.

Salenger Education Media

Market: management and sales training - 30 titles.

Most Popular: "Dealing with People", etc.

Producer/Format: sells and rents on ¾ inch and 16 mm. formats; other formats can be ordered for purchase only; produces 25 of the programs distributed.

Scorpio ETC

Market: home video: X-rated flicks - 200 titles.

Most Popular: "Football Widow", "A Love Story", "Report Card".

Producer/Format: a porn movie distributor it has begun taping half hour X-rated programs produced especially for the home video market; programs retail at $39.95; users can buy Scorpio material directly or at 50 retail stores.

Select Video (Home Entertainment Network)

Market: home video: musical performances.

Producer/Format: Home Entertainment Network, a division of Select Video, was established by Al Kooper to acquire and distribute the video tapes of musical performances for video programming.

Show/Tapes Hollywood

Market: home video: public domain movies, concerts.

Most Popular: country music series.

Producer/Format: Show/Tapes may be financially unstable. It was distributing X-rated titles in 1978 but the 1979 catalog offers no X-rated titles. Programs are available through mail order.

Sounds Unlimited

Market: home video: X-rated, general movie titles.

Producer/Format: reports that on the retail level, X-rated flicks have slid from 50 per cent to 35 per cent of sales.

Sports World Cinema

Market: home video: sports - over 100 titles.

Most Popular: "Fantastic Football Funnies", "Champions Never Quit", "Fire and Rain, Wheels Keep Rolling".

Producer/Format: one of the best known distributors of sports tapes to the home video market; programs are available by mail order and through 50 retail stores. Most of their programs were not on broadcast TV. Recent additions are "Complete 1976 Summer/Winter Olympics" and a five-hour instructional golf series. Some programs are available in Japan, Argentina and England.

Tape Club of America

Market: home video: movies, public domain titles, X-rated films, originals, concerts - 200 titles.

Most Popular: "Swingin' Stewardesses", "God's Little Acre", "Are you now, or Have you ever been".

Producer/Format: its claim to fame is its venture with Theatre-to-Tape, a newly formed production company which videotapes New York plays which are distributed on tape to home video market via TCA; the first taping is "Are you now, or have you ever been" and under consideration are "Dracula" and "Buried Child". Users can buy directly or from 550 stores.

TCA Industries

Market: home video: movies, dance shows, concerts, stage plays.

Producer/Format: sells videocassettes in theatre lobbies where the film is screened, e.g. "Mysteries of the Gods" $59.95. TCA has theatrical distribution rights and video rights; tapes of the movie are available at regular video outlets. TCA concentrates on tapes of top current stage plays such as "Are you now or Have you even been?", "Man of La Mancha", "Passion of Dracula". Tapes are used for foreign theatrical distribution as well as home video.

TDK

At the CES, Winter 1980, TDK showed its own Avilyn HG blank videocassette to go on the market by the end of 1980.

TDX

At the CES, Summer 1979, TDX (which was planning a three hour VHS tape for use in a two hour mode making it a 3/6/9 tape) is now designing a 2½/5/7½ hour VHS cassette. It also showed a 30 minute cassette for short programs.

Televista Projects

Market: educational and video art - 21 titles.

Most Popular: "Three Faces of the South", etc.

Producer/Format: a non-profit corporation organized in 1974 to produce and distribute videotapes, it rents and sells tapes on Beta, VHS and ¾ inch formats.

Telstar

Market: instructional and skill training - 400 titles.

Most Popular: "Better Spelling", etc.

Producer/Format: produces and distributes software for educational and business markets; all series are available on any video format, generally with text.

That's Entertainment

Market: home video: X-rated, general movie titles.

Producer/Format: reports adult sales used to be 85-90 per cent of tape sales but are now (1980) only 75 per cent.

Thomas Film Studio

Market: home video: movies, concerts, public domain flicks - 500 titles.

Most Popular: "Patton", "Mash", "Story of O".

Producer/Format: operates two stores in the Detroit area and plans to triple by 1980-81; each store stocks over $100,000 worth of pre-recorded videotape. Users can buy over the counter or via mail order. It distributes 50 of its own public domain titles and supplies five other stores with videotapes.

3-M

At the CES, Winter 1980, a 30 minute VHS blank cassette was added to its line, and its February and March sales promotion offered a $4 rebate with purchase of a Scotch two-pack.

3-M has established an "Optical Recording Project" within its Magnetic Audio/Video Products Division to develop plans for optical disc technology and videodisc mastering and replication. It holds patents in this area.

Thunderbird Films

Market: home video: public domain films - 300 titles.

Producer/Format: busted in 1971 for selling an illegal print of "Beach Blanket Bingo" to an undercover agent. Thunderbird is now selling public domain titles, mostly PD material on Beta, VHS, $\frac{3}{4}$ inch and 16 mm. formats. Material is sold domestically and in Japan, Australia and Great Britain.

Time/Life Multi Media

Market: educational, entertainment, sales/management training - over 500 titles.

Most Popular: "Speed Reading", "America", "Ascent of Man", "Civilization".

Producer/Format: one of the top distributors of video and film programs it may enter the home video market soon. The TL entertainment catalogue features many Columbia Pictures movies on all video formats, rock concerts on tape, etc.

The Time/Life Home Video Club in 1979, offered feature films, drama, children's shows, sports on $\frac{1}{2}$ inch cassette and later on video disc. It has 20 Columbia feature films on contract and is selling and renting four new programs from the NOVA series which aired on PBS: "Blindness", "Living Machines", "The Elusive Illness", "Mr. Ludwig's Tropical Dreamland". These will be sold for $150 on $\frac{1}{2}$ inch formats, $200 on $\frac{3}{4}$ inch video cassettes, and $750 on 16 mm. film. Each show runs for 57 minutes.

TVX Distributors

Market: home video: X-rated films and cartoons - 300 titles.

Most Popular: "The Opening of Misty Beethoven", "Barbara Broadcast", "Inside Jennifer Welles".

Producer/Format: one of the major distributors of X-rated software; sold directly from TVX or from 400 stores; titles sold in U.S., Japan, Canada, Brazil, Australia, South Africa, Paraguay, Turkey, Thailand and northern European countries. TVS is a division of Cinema-Video Enterprises.

Twentieth Century Fox

Market: theatre flicks: pay TV: home video (Magnetic Video).

Distributor/Format: in 1979 Fox released "Boys from Brazil", "A Wedding", "Quintet", "A Perfect Couple" and re-released "The Towering Inferno" to PATV in advance of free TV. In 1980, Fox plans to gear up for major movie production for the PATV and video cassette markets; in five years the company plans to spend as much to make PATV and video cassette products as it now does on theatricals. At least two movies a month debut on PATV.

University of Wisconsin/Green Bay/Teleproduction

Market: College telecourses, training - 70 titles.

Most Popular: "Consumer Money Management", etc.

Producer/Format: sells and rents programs on $\frac{3}{4}$ inch and quad to colleges, public TV stations and CATV; produces all programs distributed.

Viacom

Producer/Format: with Magnetic Video, Viacom produced the first made-for-video programming: a three-part dance instruction package called "Watch Your Step"; at least one more will be ready by spring 1980. Viacom wants to sell cassettes, not rent them (see Magnetic Video).

Vid America see Video Corp. of America

Video Action Library

Market: home video: public domain movies, made-for-home video productions, cinema history - 250 titles.

Most Popular: "The Chaplin Mutuals", "Study Skills", "Mother and Child".

Producer/Format: rents or sells home video programs; distributes from Videography, Pacific Coast Community Video and Blackhawk Films; titles available for one-week rentals include "Chicago Jazzy Jam" ($10), "Instant Backgammon" ($25) and "Professional Volleyball" ($7.50). Customers can buy or rent directly from VAL or buy from 60 stores.

Video Alternatives

Market: home video: X-rated, general titles.

Producer/Format: says it used to sell about 40 to 50 X-rateds a month but this number has dropped because of competition from new titles, because the novelty is gone and hardcore programs are not good enough for customers to purchase regularly.

Video City

Market: home video: movies, concerts, cartoons, X-rated - 1,000 titles.

Most Popular: "Mash", "Flesh Gordon", "Candy Stripers".

Producer/Format: a mail-order company it offers programs from larger distributors: Allied Artists, Magnetic Video, Nostalgia Merchant, Media Home Entertainment, and X-rated videotape companies.

Video Club France

Market: French home video: movies, cartoons, concerts, X-rated films, sports - 1,000 titles.

Producer/Format: the Paris company's slogan is "Television à la carte". It was formed in 1976 with programs available only to club members who number about 1,600. It offers French and American films - the National Telefilm Associates line, Mister Magoo cartoons and X-rated flicks ("Deep Throat", etc.) and is starting similar clubs in Egypt, Switzerland and Germany.

Video Communications Inc.

Market: home video: movies - 500 titles in 1980.

Most Popular: "Pinocchio", "The Lifes and Times of Grizzly Adams", the G-Rated "Alice's Adventures in Wonderland".

Producer/Format: does all program duplications from VCI in Tulsa; has rights to over 400 titles, of which 300 are exclusively owned; it distributes programs from Sunn Classic Pictures, Warner Bros., Allied Artists, United Artists, American National Enterprises, RKO and Crown International. It sells tapes by mail order and through 500 stores. It also produces a learning and development series: printmaking, candlemaking, water coloring. In 1980, VCI is adding 56 more titles: new films from Dimensions Pictures and Schick-Sunn.

The Video Connection

Market: home video: movies, old TV shows, X-rated flicks - 500 titles.

Most Popular: Westerns, serials, X-rated.

Producer/Format: a small mail-order shop it offers programs from Nostalgia Merchant, Magnetic Video, Allied Artists and Blackhawk Films.

Video Corp. of America

Market: home video: movies, sports, made-for-home video productions, pay TV shows, cartoons, soft X-rated - 150 titles.

Producer/Format: VC is the largest program renter to the home video market. Vid America is its rental club (May 1979). It offers programs from United Artists, Magnetic Video, RKO, independents, special shows from Warner Cable's pay-per-view Qube System, and three tapes about baseball produced for the home video market. Customers can rent by mail order only. Its production arm is Teletronics, New York. The original contract between Vid America and United Artists is for 3½ years and unlike most other deals between a video distributor and a film producer, the deal is exclusive, at least in rentals. Rental charge: $9-$14 weekly with VA receiving over $1 million during the contract time.

Vid America catalogues appear monthly beginning in 1980. In January, 1980, it acquired exclusive home video rental rights to three Pyramid Film titles, including "Scared Straight", plus "Who are the Debolts and Where Did They Get 19 Kids?", "CPR for Citizens", "Bleeding" and "Water - Friend or Foe".

Video Dimensions

Market: home video: movies, concerts, cartoons, old TV shows, serials, X-rated films - 300 titles.

Most Popular: "Star Trek Bloopers", "Super Bloopers", "What's Up, Tiger Lily?".

Producer/Format: VD offers public domain material, plus programs from Magnetic Video, Nostalgia Merchant, Blackhawk, RKO, Allied Artists, Media Home Entertainment, Video Tape Network, Quality X Video Cassette. It sells directly to consumers and through 14 retail stores. It claims to have several exclusives including "Nudie Classics", a Betty Boop festival, the pilot show for "Lost in Space", "The Stones Story" and "The Beatles Story".

Videogrammes de France

Videogrammes de France was probably the first company in the world to explore the potential of the video software market. In 1978 it no longer made its own programs. It now acts as a broker, putting out work to outside producers. Videogrammes is a joint operation of Librairie Hachette and the state-owned Société Francais de Production (SFP).

Video Instructions Products

Market: home video: "how to" gambling tapes; series of cassettes on gambling, poker, craps, blackjacking and handicapping.

Most Popular: "How to Beat the House at Blackjack".

Producer/Format: a newly formed company (1979), it produces and distributes its own product via mail order only. "How to Beat the House..." would cost $225 for the two-hour program.

Video King

Market: home video rental library: X-rated and general - 800-900 titles.

Producer/Format: VK is completing a deal with United Artists and Paramount, and Columbia Pictures and a short-term deal with Time-Life Films. It plans a pirate-proof library system in which tapes are sent to members for a one-week period as part of an annual subscription package. About six per cent of titles stocked are X-rated and these are marked up by almost 100 per cent while mark ups on regulars are from 8 - 13 per cent; X-rated represents about 30 per cent of all tapes sold and accounts for 65 per cent of the company's dollar volume.

Video Learning Systems

Market: patient education, nursing, electrical, mechanical training - 800 titles.

Most Popular: "Sounds of Anger", etc.

Producer/Format: rents and sells on all ½ inch and ¾ inch formats to business, health care, educational markets in New England.

The Video Library Co.

Market: home video: movies, cartoons, public domain films, concerts - 800 titles.

Most Popular: "Story of O", "Sound of Music", "Groove Tube".

Producer/Format: affiliated with Video Learning Systems it is the largest distributor of home video software in New England; sells by mail order and at 60 stores. Programs are from Allied Artists, Magnetic Video, Media Home Entertainment, Nostalgia Merchant, Cinema Concepts and Sports World Cinema.

Video Shack

Market: home video and offshore oil rigs: movies, old TV shows, cartoons, X-rated films - 400 titles.

Most Popular: "Patton", "Mash", "Story of O".

Producer/Format: it rents and sells through mail order with titles from Magnetic Video, Allied Artists, Media Home Entertainment, TCA, porno distributors. It sells to overseas markets and sells blank cassettes and VCR accessories. In 1980, VS says X-rated flicks represent about 40 per cent of sales, but expects them to drop to about 1/3 of sales and taper off more.

Video Tape Network

Market: home and college video: concerts, comedy, cartoons, movies - 300 college - 47 home.

Producer/Format: distributes hip, innovative programs to the college closed-circuit market. VTN started selling to the home video market in 1978. Customers can buy directly or through 500 stores. VTN produces 10 per cent of its programs. Tapes include Richard Pryor and "Frisbee Dynamics and Techniques" with some public domain material and "how to" programs such as Julia Child cooking lessons, a punk rock documentary and Bela Lugosi horror classics. In 1980 it acquired non-broadcast rights to "Comedy Tonight" - hour-long routines by the Chicago Hysterical Society. It is the first comedy program produced specifically for home video. VTN also plans to distribute the program via closed circuit college network and to pay TV. It picked up exclusive rights to the first Ringo Starr special, a 60 minute rock musical comedy based on "The Prince and the Pauper" story. VTN is releasing "The Funnier Side of Eastern Canada with Steve Martin" for home and non-broadcast use: a one-hour program available through VTN and the dealer network.

Video T.E.N.

Market: home video: public domain movies, old TV shows, X-rated films, concerts, cartoons - 416 titles.

Most Popular: "Amos 'n Andy" TV series, "The Third Man", "Reefer Madness".

Producer/Format: public domain programs predominate; customers can make mail order purchases, or buy at 18 stores. Material includes X-rated movies from TVX and Quality X Video Cassette. It offers an exchange program and doesn't use a "guard" system because of customer complaints.

Video Vision

Market: home video.

Producer/Format: VV has cassette rights on a non-exclusive basis to three classics: "Treasure Island", "Aladdin's Lamp", "Rip Van Winkle" from 21st Century and produced by Nicholson-Muir Productions. It sells directly to the public through Video-To-Go N.Y.C., and nationally through the Video Vision distribution system.

Video Warehouse

Market: home video: grade B movies, X-rated flicks - 193 titles.

Most Popular: "Swinging Stewardesses", "Cry Uncle", "The Oldest Profession".

Producer/Format: secures rights from independent movie producers; doesn't own duplicating and distribution; claims to have 1,100 dealers. Movie material includes "Cars that Eat People", "Astro-Zombies", etc.

Video West

Market: home video: original CATV shows - 10 titles.

Most Popular: segments on Devo, Beatlemania and marijuana gardening.

Producer/Format: all programs offered were originally produced as a magazine CATV show in Marin County, California; all programs produced in 1978-79 are going into home video. A one-hour program costs $39.95 (tape). Retail distribution is through Astronics, but customers can buy directly from VW.

Video X-Rated

Market: home video: X-rated and general; about 100 general titles; no data on X-rated.

Producer/Distribution/Format: claims to be the largest wholesaler and distributor in the adult tape field; says 60 per cent of tapes sold are X-rated.

Visiondisc

Market: home video: concerts on tapes - 10 titles.

Producer/Format: small production/distribution company has shot 10 live concerts in New York, including Todd Rundren at the Bottom Line, Alberta Hunter, Mary Lou Williams, and Dakota Station. Customer complaints are that VD doesn't deliver goods on receipt of payment; VD's response: it has trouble supplying Beta-format tapes and has problems of non-delivery. Customers can buy by mail order or through 78 stores. Programs are not available on videodisc.

WCI: Warner Communications Inc. (owns Atari)
Warner/Electra/Asylum is the WCI distributor.

Market: home video, films.

Producer/Format: At the CES, Winter 1980, WCI offered 21 programs including "Superman", and '10' available later in 1980, "Oh God", "Blazing Saddles" and "The Exorcist". Suggested list prices: $55-$60. Fotomat sells about 10 WCI titles, priced from $49.95 to $69.95, in the "Drive Thru Movies" service (see Fotomat).

Distribution and Marketing:

Warner/Electra/Asylum handles record sales and will oversee video software sales which includes incentive discounts up to five per cent below normal wholesale price (standard three per cent below retail price). WEA requires $3,000 opening order for a retailer to become elegible for discounts and that package must include at least three copies of every title.

Visual Energy Studies

Market: teacher education - 17 titles.

Most Popular: "Nuclear Energy Colloquium", etc.

Producer/Format: provides teachers with an understanding of energy-related programs; programs in ¾ inch only.

Wizard of Vid

Market: X-rated flicks: home video - general movie titles.

XI Com

Market: business, management training - 45 titles.

Most Popular: "Meetings, Bloody Meetings", etc.

Producer/Format: sells and rents on Beta, VHS, ¾ inch and 16 mm.; some tapes feature John Cleese (Monty Python fame); 10 programs are produced by XI Com.

XS Productions

Market: home video: comedy - one title.

Most Popular: "Comedy Tonight".

Producer/Format: Chicago Hysterical Society performs on "Comedy Tonight", a 60-minute program produced and distributed by XS. It sells for $69.95 on Beta and VHS, or $99.95 on $\frac{3}{4}$ inch. Customers can buy directly or through 25 stores.

3. Rights and Piracy

Rights

FCC: "Home Video: A Report"*

The advent of inexpensive videotape and videodisc technology has, like most technological advances in information handling, created some new copyright issues. It has occurred, however, against the background of recent Congressional revision of the copyright statutes. This has reduced the magnitude of the controversies that would have surrounded these technologies without the revision of the law. The revision clarifies that videotapes and videodiscs are copyrightable and fixes in the statute the previously developed judicial doctrine of fair use as an exception to the exclusive rights held by copyright owners. It even makes it clear that fair use has some application to audio-visual materials, although the limit of the concept for such materials is unclear and may simply be left to judicial development. The production of programming for tapes or discs, and the distribution and sale of playback-only devices seem to raise no new copyright questions.

The difficult copyright issues surrounding these new technologies relate to the sale of machinery capable of audiovisual recording. On any scale sufficiently large to be profitable, there seems to be little doubt that the copyright laws treat massive commercial video copying as infringement going well beyond whatever eventually is permitted under the concept of fair use.

It is clear, however, that thus far the courts have authorized private, in-home recording and copying of copyrighted broadcast audiovisual works, a decision which legitimates the most common uses of these devices.

Court cases, however, leave several important questions unanswered. Most in-home recording is "fair use", unless the Betamax case is overturned on appeal. That case, however, reserves for another day questions raised by tape duplication, tape swapping, or copying from media such as cable television or pay television.

* pp. 84-85.

Still unresolved, as well, are the limits under fair use of videotape technology by educators to copy educational materials for classroom use. Plainly, "fair use" will permit some such educational copying, but the preliminary injunction granted in Encyclopedia Britannica Educational Corporation v. Crooks indicates that at least some judges foresee definite limits to permissible educator videotaping.

ITA 1979

Video presentation can, due to its relative novelty, bring unexpected problems involving copyrights and royalties, attorney Steven Ezon, who practises in Manhattan, told those attending a 1979 ITA workshop.

Ezon stressed the importance of making sure that a licensor actually possesses the rights he purports to pass on. An example cited at the workshop was a situation such as a movie which has a scene with a radio being turned on and a song coming out. The song has been licensed for the movie, but the question for video is whether the holder of the movie rights can pass those rights on in video cassette distribution. Similar cases were said to have passed through the courts in the 1950s as television began to make unanticipated use of movies; frequently, the court outcome was decided on the basis of the language in the original contract.

Ezon said that since this question of whether the licensor has the rights to pass on is the prime source of legal problems in rights purchases from someone other than the original producer, the licensee should "check the upstream agreement" or make the deal contingent upon those agreements. His other suggestions included providing for no unilateral cancellation without both notice and an opportunity to cure the default.

Ezon also stated that the scope of the rights must be clearly defined. Purchase of exclusive rights means that exclusivity can go no further than the rights-to the licensor possesses. Ezon concluded his remarks with the sad end of many rights disputes - the right to litigate, noting that in order to protect claimed rights, it is necessary to show every link in the chain from the original producer through middle men to the current owner.

Music Rights in Home Video

Home video distributors and at least one retailer are named in a multi-million dollar lawsuit involving alleged unauthorized use of music on videocassettes. The case involves Northern Songs Ltd., a music publisher controlled by ATV Music. The performances are Beatles concerts distributed by Video Communications, Video Tape Network and Media Home Entertainment. Other distributors are involved and will also be cited. Video Shack and the principal executives of each company are also charged with unlawfully handling the shows.

The case involves synchronization rights -- putting music on the film, which cannot be done without approval of the publisher. ATV says such rights were never granted. The performances -- from the BBC, the "Ed Sullivan Show," and concert performances (New York's Shea Stadium, Tokyo, etc.) -- were not authorized for home video distribution.

This 1980 suit could become the test case on artists' and publishers' rights -- especially those involving synchronization and rights to music performed on home video presentations.

Northern Songs is seeking damages of $1 million from each defendant, plus damages for each alleged infringement (unauthorized song). Northern also wants the distributors to call back every cassette still in dealers' hands.

RIAA

The RIAA began an anti-counterfeit campaign that is expected to abate not only counterfeit audio recordings but also video cassettes. RIAA's million-dollar-a-year anti-crime project is to be augmented this year by a $50,000 contribution from the National Association of Record Merchandisers (NARM). RIAA and NARM have established a toll-free telephone line to invite reports of counterfeiting sales throughout the industry (800/223-2328). Video cassette counterfeiting reports are referred to the Motion Picture Association of America security office for follow-up.

The Sensus Project

In 1979 there were private attempts to sort out some problems of rights and residuals which threaten availability of programmes in video formats. The Sensus Project includes musicians, artists (writers through their respective unions) and the craft unions. The Project plans to bring these groups together to put together concrete proposals. The Sensus Project address: 14C Priory Avenue, Chiswick, London W4 ITX.

Universal City Studios (MCA) Plus Walt Disney Productions vs. Sony Corp.

In 1976, Universal/Disney sued Sony Corp. and retailers on copyright infringement, interference with the sale of recorded programs to broadcasters and "unjust enrichment". They demanded that Sony stop manufacturing and distributing its Betamax VTR or modify the machine so that it would not record copyrighted material. After a five week trial, Betamax received acquittal. L.A. Federal District Court Judge Warren J. Ferguson ruled that "non-commercial home use recording of material broadcast over the public airwaves is 'fair use'". The court rejected the plaintiff's claims that widespread use of VTRs would cause a decline in actual television viewing. Betamax owners will simply "rearrange" their viewing hours and will "play their tapes when there is nothing on television they wish to see and no movie they want to attend." Sony's defense in the proceedings: copyright law allows home recording; "privacies of life" must be protected from government intrusion. Judge Ferguson emphasized he was not ruling on VTR use outside the home, application to pay or cable TV, tape application or "tape swapping, organized or informal". The 1976 copyright law was partly aimed at the problems raised by such technological innovations as photocopiers and audio tape recorders.

UNESCO 1979

Compensating royalty on hardware as well as blank audio/video tapes and cassettes should be introduced to reimburse producers, performers, authors and composers of programs and videograms against any possible loss of revenue resulting from home taping: this was the decision reached by subcommittees of the International Union for the Protection of Literary and Artistic Works, Intergovernmental Copyright Committee and

Intergovernmental Committee of the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations, under the sponsorship of UNESCO.

Piracy

According to Variety, February 20, 1980, the FBI arrested 54 people involved in illegal film pornography and film-tape piracy operations that month in the U.S. These arrests were the result of a two-and-one-half year undercover operation centred in Miami. Top figures in organized crime are involved in the pornography and piracy business: e.g. Mickey Zaffarano and Rubin Sturman. Grand jury piracy indictments named:

> Mickey Manos, associated with M&M Video Systems Inc., Houston, Texas, infringed on copyrights of "Grease", "Saturday Night Fever", "Heaven Can Wait", "Star Wars", "Looking for Mr. Goodbar", "The Godfather", "The Godfather, Part 2" and numerous other films;
>
> Rubin (Ruby) Goldstein and Barbara Gottesman, operating out of the National Film Co. in Woodland Hills, California, charged with distribution of pirated video tape cassettes of some 40 major films including "Jaws" and "Death on the Nile". Both were named for racketeering activity, and sold titles to undercover agents;
>
> Some 10 people cited in a single indictment for pirating 32 films and operating out of the following Los Angeles area firms: Discount Distributors, Discount Distributors Co., Video Club of America, TVX Distributors, Smoliak & Sons Inc., Videostar and Medi-Billing Inc.

Motion Picture Assn. of America's Film Security Offices on the west coast have been working with the FBI for over a year in its investigation of film piracy. Among the films recovered in the recent raid was a tape of Avco Embassy's "The Baltimore Bullet", a film which was not scheduled for release until March 28.

Although this was the only film thus far found which has not yet been in domestic distribution, as recently as December 2, The Los Angeles Police Department, in a raid, recovered a print of Universal's "The Jerk" which then had not been released theatrically.

As to how a pirate got hold of a print of "The Baltimore Bullet", Avco Embassy said that prints of the film had been used for sneak previews around the country and that despite security controls, pirates may have "loaned" a print to use for duplication purposes.

The print of the Avco Embassy film was said to have been found at Video Star, in Los Angeles an alleged duplicating and distribution center for pirated material which was also much involved in pornography.

Among the other tapes recovered from various production and distribution centers, were: "Kramer vs. Kramer", "Electric Horseman", "The Rose", "101 Dalmatians", "Rocky II", "Dr. Zhivago", "Superman", "Star Wars", "Apocalypse Now", "The Deer Hunter", "Heaven Can Wait", "Cuba", "Grease", "Turning Point", "A Clockwork Orange", "Casablanca", "Invasion of the Body Snatchers", "Boys From Brazil", "Midnight Express", "Jaws", "National Lampoon Animal House", "Same Time Next Year", "The Godfather", "Bad News Bears", "Pinocchio", "2001", "The Sting", "Goodbye Girl", "Logan's Run" and "Night Caller".

The MPAA expected more titles to be identified.

Tapes were found in both the $\frac{3}{4}$ format and the $\frac{1}{2}$ inch format. The latter are sold on the consumer market, while the former are often sold to other persons working in film piracy so that they can make prints for their own territories from those masters. The $\frac{3}{4}$ inch tapes are often sold to foreign-based television outlets as well.

As to what mov es, aside from tightening security controls, were being developed to fight piracy, Avco Embassy said the company had been working with the FBI and the MPAA on a procedure in which a symbol would be put on each print so that if a tape is made from that print, the symbol is transferred onto the tape. Thus if and when the tape is recovered by the government, it would be possible to trace back to the pirates' contact.

The maximum penalty for interstate transportation of obscene material is five years in prison and a $5,000 fine. First conviction for copyright violation carries a maximum penalty of one year and a $25,000 fine.

In Europe, the American film industry is facing multi-million dollar losses because of piracy sales. Pirated cassettes of the latest hit films sell for around $110 in Germany. Interpol is investigating the piracy problem in Hamburg, Amsterdam and London. There are three major criteria involved in film pirating: the practice often occurs in a country which either had no television or underdeveloped TV, or it happens in countries where there is considerable wealth and where there are few recreational alternatives. The pirated videocassette business is flourishing in the Middle East, in the China Seas region, in South Africa, the Caribbean area and in Venezuela.

In Hong Kong, with about 50,000 video machines in homes, legal video cassettes sell for $HK 150 to $HK 400 each. Pirated cassettes sell for much less and are sold under the counter. The legal tangles of "copyrighted" versus "copied" pirated video cassette films are in the process of resolution. The problem exists not only for popular western films, but also with locally and Taipei-produced Chinese Kung Fu and swordfight epics. In pirated material, Chinese sub-titles appear on the screen, or there is the occasional blink on the screen indicating that the recording pause button was engaged when the commercials came on.

There are only three legit video cassette production outfits in Hong Kong: Robert Chua Productions, Magnetic Video U.K. and Ocean Shores Video, Ltd.

C. TRENDS AND STUDIES

Arbitron*

Most people owning home video cassette recorders bought them to record programs while they are at work, asleep or otherwise unable to watch the shows at time of broadcast. On average they tape about two shows a week, but aren't too quick to play them back. When they tape while viewing, many tend to avoid recording some portions - the commercials, more than anything else.

These are among the findings of a survey conducted by Arbitron Television among 300 home VCR owners, Autumn 1978. In its report, Arbitron says the respondents were scattered throughout the United States but did not constitute a random sample and that the findings should be considered "exploratory", not projected to the total VCR-owning population. It was Arbitron's first study of VCR home usage.

Questions in the survey dealt with each respondent's three most recent recordings. Shows most frequently recorded were series (37.9%) and movies (31.5%), with sports in third place (10.1%), followed by entertainment specials (5.1%) and documentary/educational programs (2%).

Use of an automatic timer was the most frequent method of recording, representing 45% of the shows, as compared with 35% taped while the respondent was viewing the same show and 20% taped while viewing a different show.

The average respondent had taped one show about every three and a half days, based on the three most recent recordings, but about 14% had taped one or more shows per day while 8% had not taped one in more than two weeks.

* For an analysis of the Arbitron study, see FCC: "Home Video: A Report" February, 1980.

Almost half (48% of the shows had been played back once, 9% had been played back twice and 5% had been played back three or more times, but 30% had not yet been replayed. The average time lag between recording and first playback was 9.1 days.

Few respondents (18%) reported using the fast-forward switch to avoid portions of programs they had recorded. But those who did use it usually did so to pass over the commercials. "Boring" material, promos and time-outs in sports events were among other segments avoided.

Although relatively few used fast-forward to skip over material that had been recorded, over half (58%) said that during taping while viewing the same program they use the pause button to avoid taping certain portions - again, usually the commercials. Of the pause-button users, 64% said they used it on 80% or more of the programs, and 97% said they used it to omit commercials, 12% to avoid "boring" material, 8% to pass up promos and 1% during sports time-outs.

"Considering all of the factors involved," the Arbitron report says, "approximately one television show out of all those viewed over a five-week period in the typical VCR household in the sample stands to lose its commercial exposure. This would amount to deletion from one out of every 10 VCR-taped shows."

In 53.3% of the cases, the report shows, respondents bought their VCR's to record while they were at work or asleep, 19.7% to record while viewing other programs, 15.7% to record movies, 15% so they could watch at their convenience and 12.3% to build a library of taped shows.

In practice, 58% said they were building libraries - usually movies, followed by series, specials, sports events and documentary/educational programs in that order. But on the whole, respondents indicated that eventually two-thirds of the tapes would be erased.

Arbitron said 28.3% of the respondents were in cable homes and that 40% of these had access to pay TV - of whom 35.5% said they had sometimes taped pay-cable programming.

The respondents were described as more affluent and better educated than the U.S. average, with a tendency to invest significantly in such other innovations as digital watches, video games, quadraphonic sound systems and home computers. The average age of the VCR household head was 40, as compared with the national average of 46.

Billboard Magazine

In 1979 Billboard Magazine was optimistic about the trend toward original productions of music and accompanying video in cassette and disc distribution. But, the legal jungle of rights is still a major stumbling block to development of video music.

CATJ

CATJ (Community Antenna Television Journal), July 1979, makes the following observations on HV, PATV and CATV:

When cable came to Oklahoma City, VTR sales quadrupled in days. Sales went up so fast that dealers were put on an allotment program. Between the non-cable public and the cable-served public VHS machines were on back order. Customers can find HBO or Showtime or Fanfare movies on the street for the price of a blank cassette plus a $20 bill the day after the movie first appears on local PATV. Retail dealers display stacks of "demo" tapes - in effect, the current HBO program schedule. Cable is the reason why video-tape machine sales are booming. Tape dubbing of premium movies off local-to-Oklahoma City cable systems and the MDS service runs to around 5,000 dubs per month, largely going to non-cable, non-MDS viewers. Cable and MDS relaying of premium movies is so widespread that, nationally, even if there were 50,000 private TVRO terminals taking the signal off the satellite directly, and not paying for it, the present number of people getting the same services second-hand through a neighbour with access to cable or MDS would dwarf the private satellite number.

CATJ predicts that premium-cable-equipped homes are by far the heaviest buyers and users of home video tape machines. Its advice to premium service operators: figure out a way to encode the premium service so that it's not degraded for live viewing but will not "take" on a home VTR unit.*

CES Summer 1979

One hundred and fifty companies participated in the hardware/software show. Key trends were a near universal move to six hour VHS capacity; programmable capacity in many VCR's plus features of fast forward and reverse scan/preview. Portable VCRs are becoming more popular; there was an increasing number of home computers (Texas Instruments entry); the VCR software boom will continue with most CES 1979 offerings in porno and the arrival of Columbia Pictures; in home video cameras most companies were offering versions of units introduced during 1978-79, with cameras becoming lighter, and zoom capacity increasing; there were efforts to enhance or replicate stereo/audio programmable capacity into the TV set.

CES Winter 1980

New products made especially for cassettes and discs were surfacing: record companies and film producers are creating software for home video.

New X-cassettes were being produced on video tape especially for the cassette market, bypassing theatrical runs.

VCR/VTR time wars were thought to be over with VHS at six hours and Beta around five hours. However, manufacturers are stripping off features to bring down prices to compete with the RCA Selectavision player at $500. At the same time, there are moves towards lighter, more portable units adding special features such as fast-forward previewing and longer programmable periods.

Video and TV Set trend: tiny portable receivers were added in most setmakers' lines: promotion was concentrating on new uses of mini-sets. The mini-TV set is a way of monitoring what is being recorded on VCR while

* Indeed, super station head, Ted Turner, says he's not concerned with competition from video cassette or video disc. He says they amplify the value of special programming. He also says every home in the U.S. will have cable TV within 10 years.

watching another channel (can clip out commercials) or as a field monitor if the user's video camera doesn't include a viewfinder playback monitor.

Video and Home Computers Trend: Arthur D. Little Co. predicted a reduction of personal computer companies during the 1980's through consolidations. During 1980 alone, they predict 25 per cent fewer companies in business by December 1980. Two hundred thousand home computer units will be sold by year's end and that equals $80 million. By 1982, the home computer market will grow to 800,000 units or about $220 million retail.

Columbus Dispatch/Citizen Journal

Research into cable viewing patterns: 32 per cent of local households have bought extra programming through cable TV. One third of those homes were tuned to cable-only programming instead of commercial TV. Conclusion: cable means an erosion of traditional commercial TV viewing.

Electronic Industries Association (U.S.)

Home VTR sales to dealers rose 73.4 per cent in January, 1980, over January, 1979. First month 1980 unit sales were at 40,443 vs. 23,330 in January, 1979.

Electronic Industries Association (Japan) Study 1978

Nineteen point five per cent of respondents use video to build a library. The average number of tapes per user is 10.5 and only 2.1 are blank. Recorder owners buy 9.7 video cassettes per year average. Four per cent own cameras. Machines are used every three days, each recording averaging 67 minutes. Average use is 10.1 times monthly. Twenty-two per cent indicated double that rate. VTRs main use: 98.9 per cent record broadcast programs off-air; 43.2 per cent while asleep or out; 40 per cent for repeat viewing; 27 per cent recording while watching another channel. Foreign movies are most popular, followed by sports, music, drama and documentaries. Seventy-four per cent were aware of copyright law restrictions (machine handbook was a guide). The survey was based on 187 questionnaries in 1978 (may no longer be relevant).

FCC: "Home Video: A Report"

A Report on the Status, Projected Development and Consumer Use of Videocassette Recorders and Videodisc Players

The Report mentions that a state of consumer confusion exists over home video devices. It reaches no firm conclusions about the impact of videocassettes and discs, but it notes that the devices are likely to eat into commercial network's membership once certain issues are resolved. The Report quotes last summer's EIA forecast of 1983 sales of 2.1 million VCRs and 52 million blanks, predicts a split of the VCR market into inexpensive machines (with limited features) and expensive, versatile units and foresees vidisc players outselling VCRs within five years.

Fotomat

By the end of 1979, Fotomat claimed rentals outnumbered sales 3-to-1 in a '79 study of the western states' video cassette market. Research revealed that the video renter is male, about 35 years old, a college grad, an avid movie goer who watches TV moderately to heavy, has twice the average income and is interested in time-viewing of movies.

By March 1980, Fotomat said that cassettes appeal to a different audience than the movie audience and will not take away from movie market profits: day/date releases will give everyone a free ride on movie promo efforts. Fotomat sees rentals surpassing tape/disc sales in future. Programming has gone from nothing to a "no limit" situation. In science fiction, rentals averaged 10-1 over sales with movies such as "Clonus Horror" and "Lucifer Complex" 14-1. Current titles such as "Saturday Night Fever", "Marathon Man","Foul Play", 7-1. Sexually oriented films: "Once is Not Enough", "Pretty Baby", 7-1, and "Looking for Mr. Goodbar", 18-1. Collector appeal movies (theatre, movies), 5-1.

Fotomat feels that VCR prices will come down and new hardware will come at competitive prices ($800 machine). VCR dealers will not allow the disc market to carve away the tape market. Rentals may drop below $5 with both disc and tape renting for around the same price. Fotomat studied how sales patterns change nation-wide after feature movies appear on pay or cable. In Los Angeles, rentals are bad because PATV subscribers see the latest movies on TV. The photography industry as a whole may follow Fotomat's example and head into sales of tapes and home video equipment (Eastman Kodak).

Gallup

In 1979 Gallup said research showed that existing VCR owners will buy programming, but programming is so far not a sufficient motivation for people to buy the hardware in the first place. Sixty per cent of programming sales are X-rated films.

Gallup poll began its second major study of PATV and home video viewership in February 1980, as a follow up to Gallup's 1977 research. More than a dozen customers signed for the examination which starts with a survey of about 4,000 homes in six markets.

Home Video Report Prediction

The 1980s began with a VCR player population of some 1.1 million units (HVR, January 7), with penetration figured at 1.4% based on 76 million TV homes. HVR's projection for January 1985 shows a player population of about 5.3 million, considerably below estimates put forth by VCR industry spokespersons and some analysts. The HVR estimate is based on a player population of 1.65 million by year-end 1980, followed by sales of 750,000 VCRs in 1981, 850,000 in 1982 and 1 million per year in 1983 and 1984. Unless unit sales virtually double early in the decade, the 10% penetration figures mentioned by some forecasters seem unlikely.

The programming market, e.g. video cassettes, is expected to grow to some 10.0 million units generating $425 million in retail sales by the start of 1985. This projection does not include the X-rated market.

A video disc player population of some 5 million is anticipated by the start of 1985, with disc sales expected to overtake VCR sales by 1984. A hardware market of $1 billion at retail is anticipated in 1984, assuming a $500 average price. Penetration of disc players at the start of 1985 would be 5.5%, based on a 4.5 to 5 million player population. This is lower than some forecasts of disc population, which call for penetration of around 10% by 1985. Since large-scale disc sales will not be realized until 1981, if then, HVR feels its estimate is realistic.

In conclusion, HVR's research found that television viewing spawns more television viewing. Since the emerging forms of video technology will offer users, or viewers, access to more types of programming and convenience than ever before, there appears to be room for growth for a wide variety of TV services. The only major area of competition may be VCRs vs. discs, but even there, a strong market for both is expected between 1980 and 1985.

HOME VIDEO MARKET INDICATORS, MARCH 1980

Segment	January 1980	March 1980	Year-to-Date Gain	March 1980 Penetration[1]
Basic Cable Subscribers	15.0 million	16.0 million	1.0 million	21.0%
Pay Cable Subscribers	5.0 million	5.75 million	750,000	8.0%
STV Subscribers	400,000	500,000	100,000	.6%
VCR Unit Sales	1.1 million	1.2 million	109,111[2]	1.6%
Video Disc Player Unit	10,000	15,000[3]	5,000	----

1 Based on 76.3 million TV homes
2 First nine weeks in 1980
3 Estimates range from 10,000 to 20,000 players sold

Home Video Report: Disc vs Tape Future

TDK Electronics Corp., Garden City, New York, feels sales of VCRs and cassettes will be strengthened by the arrival of video disc systems, noting that the new product will arouse the public's curiosity and draw more attention to all video products. When people visit dealers for disc demonstrations, they often purchase VCRs and blank video tapes instead, according to Ed Pessara, video products manager of TDK, who says VCRs have appeal because they can record, are portable and allow up to six hours of recording.

The new pricing structure for hardware makes VCRs more competitive with discs. The new Sanyo equipment carries a suggested retail price of $695, Pessara noted, less than the current price of the Magnavox video disc system ($775).

Fuji expressed similar optimism that the arrival of video discs will enhance all video, and the more product available, the more sales there will be for both.

Fuji says that when discs hit the scene, the initial reaction will be competition between the two, and there will probably be a short range dip for VCR sales. After a period of time, however, disc buyers will buy VCRs as well. Regardless of how many pre-recorded programs are available, people will want to record and the flexibility of VCR's will prevail.

Even if there is a slackening of sales of VCRs, Fuji sees no threat to pre-recorded or blank tape sales during that period. There are well over 1 million machines in the market now, and by year-end there could be about 2 million in homes, a fact that will provide a strong base for both blank and pre-recorded tape sales.

<u>ITA Seminar Fall 1979</u>

Opinions by Arnold Valencia from RCA Sales Corp. and Robert Gerson, senior editor of <u>Television Digest</u> with <u>Consumer Electronics</u>: Valencia said that RCA's predictions of 500,000 VCR sales this year will not be realized. He acknowledged the increasing dissatisfaction among dealers who must cope with products that are outmoded almost as soon as they are delivered and urged the industry not to get swept up in its own rhetoric.

Gerson told ITA members that there was no way VCR sales would hit 500,000 this year and expressed some doubt as to whether they would hit 450,000. He put the likely figures at between 440,000 and 450,000 units.

While software manufacturers are talking of 1 million homes with VCRs by the end of this year, Gerson said that from a practical point of view the figure is probably closer to 750,000 or 25 per cent less. Gerson said that all of the Beta-1 and VX machines should be subtracted as should those units ending up either out of the country or in educational or institutional use.

Gerson said that sales of prerecorded video cassettes have doubled this year, but so have the number of players. That keeps the industry stagnant, not growing. He pointed out that pay TV subscribers have increased 2.3 million homes from June of 1978 to June of 1979, suggesting that audiences are not satisfied with standard TV.

Gerson concluded that the industry "may have been looking through the wrong end of the telescope when it talked of 500,000 units at the beginning. It may be the ceiling at these prices."

But, Gerson says the home video industry is here to stay. He noted that it is currently about a $1 billion field and that if it never grew much past that figure it would be a viable industry. However, he said that in order to make the predictions of a giant industry come true, promotion and understanding are needed. He said that the only company that has consistently promoted the product is RCA and that one company cannot create an industry of the size envisioned.

Gerson noted that promotion as the key is evidenced by the sales of Magnavision disc players. In June, he said, stores were back ordered 40 to 60 days. Now there is plenty of inventory. He points to the cessation of promotion as the major factor in the slumping sales.

ITA Seminar Spring '80

Hollywood's move into home video distribution continues, including the day-and-date release of new movies; optical disc technology seems headed for industrial applications, leaving the home market to capacitance formats; rental vs. sale of cassettes continues to generate conflicting opinions, with Disney's entry into cassette rentals countered by Columbia's attempt to stop unauthorized rentals by retailers' private video clubs; hardware format confusion continues; incompatibility will mean less as various formats are used in industrial, closed circuit versions; the only new idea at ITA: dealers should consider renting VCRs for the weekend, just as they rent software, as a way to develop software markets.

ITA/Time study of home video users: 36 year old male, college educated, $35,000 salary. Half of all VCR owners have bought pre-recorded software, only about 20 per cent of VCR/video disc owners are on a cable or pay TV system; ownership of home video equipment doesn't change the amount of viewing time in 60 per cent of homes with such hardware; statistics will be published by ITA later.

Kalba Bowen Associates

Pre-recorded video cassettes will outsell video discs in both annual and cumulative terms until at least 1983, according to a multi-client study on "The Home Video Programming Market 1978-1983" by Kalba Bowen Associates. The study was sponsored by CBS, Magnavox, McGraw-Hill, Pickwick International and Xerox Publishing. The survey is of 600 home video owners and a second survey began in March, 1980.

Magnetic Video

At the ITA Workshop in November, 1979, André Blay stated that as the retail market expands and the price of tapes/discs decreases, rental will end. To make that possible, the industry must sell three million VCRs per year after 1980. Blay feels that the industry may have sold as few as 450,000 units to U.S. customers in '79, but that 1980 could see 600,000 sold.

National Association of Broadcasters

The NAB "Home Video Cassette Recorders" (1979 - early 1980) analysis predicts that home video usage may increase the total TV audience; the use of pre-recorded tapes has little impact on total viewing time, and most home replay tapes (time-shifted or prerecorded) are used during weekday evenings. Most VCR usage - four shows per week - is for time-shift.

New Electronic Media

The New Electronic Media study (Arbitron and Video Probe Index) signed 10 major clients and sampled Arbitron diaries from November 1979 through February 1980. Arbitron/VPI clients include ABC, CBS, Columbia Pictures, Cox, Dow-Jones, NBC, Sears/Comsat, Southern Satellite Systems, Time and United Artists-Columbia. The NEM study will identify families, including cable-only, pay-cable and non-cable homes. No conclusions are available at present.

Porno Trends

That's Entertainment distributor/retailer reports adult sales used to be 85-90 per cent of its tape sales, but are now only 75 per cent. Sounds Unlimited says pornos have slid from 50 per cent to 35 per cent of sales. Video Shack indicates X-rateds represent about 40 per cent of sales and expects them to drop to about one-third of sales and taper off even more. Video Alternatives used to sell about 40 or 50 X-rateds a month but this number has dropped dramatically. Video Alternatives says that reasons for the drop are:

(1) competition from new titles
(2) novelty is gone
(3) hardcore programs are not good enough for people to buy regularly.

RCA Prediction

RCA predicts that videodisc players will be in 30 to 50 per cent of U.S. color TV homes within 10 years. That would mean 25 to 40 million units. As the videodisc industry grows, there will be made-for-videodisc programs and this will account for an ever increasing proportion of software. Theatrical films will reach videodisc distribution within six months after release. One reason for this is that movie studios will want to capitalize on the initial promotion of the film. As for TV shows, there will be pre-buys of videodisc rights before shows are made, just as networks, pay TV and syndicators now pre-buy theatrical features before they are produced.

Regie Cassette/Locatel

Rousset-Rouard says that the French video player market is small but growing fast. There will be about 100,000 players in use by the end of 1979, and over the 1980-85 period, this will grow to 1,000,000. Present use is largely confined to home recording off television receivers. As one of the leaders of the French motion picture industry's fight against extensive use of feature films on the country's state monopoly TV networks, which pay low prices, the producer sees his video cassette rental operation driving a wedge between theatrical exhibition of features and their subsequent use on TV. Also, Regie Cassette feels it will probably become a complementary source of front money for motion picture production financing, and will be able to earn as much over a one-year period of home rentals for the holder of rights on a feature film as the TV networks currently pay, on average, for television rights - around $57,000. Roussett-Rouard believes that rentals, not sales, are the answer to home video markets in France over the next few years.

Venture Development Corp. Analysis

Videotape sales will grow faster than hardware sales during early 1980s; from just over 11 million cassettes in 1979, home videotape shipments will climb to almost 49 million in 1985, a 28 per cent annual growth rate, well above the expected 18 per cent yearly climb in VCR hardware sales. The report, "Home Video Recording and Playback Equipment" notes tape market shifts: until now, best-selling blank tapes were those carrying names of major hardware companies, supplied to them by leading tape companies; and in the last few months, major tape makers including Ampex, Fuji, Maxwell and TDK have been more aggressive. The analysis examines technical advances affecting product success and looks at consumer attitude, including price sensitivity.

Video Corp. of America

At the end of 1979, Video Corp. of America forecast that 5.3 million VCR units will be in place by 1982 and 12.2 million by the end of 1985. If one in four families rents a cassette regularly, returns to program suppliers will be far beyond revenues from TV or PATV.

Video Probe Index

The 1979 study completed for the National Cable Television Association concluded that pay cable homes have greater awareness of videocassette recorders and electronic video games and are more likely to use VCRs for a variety of activities than any other demographic group studied and that pay cable homes are keyed more to ownership than their non-pay counterparts. The findings cannot be projected because they were done only in cable TV markets. Pay cable subscribers said they would record fewer movies, HBO specials of sports and children's shows - always under 50 per cent. A larger VPI survey began in the Fall, 1979.

D. INFORMATION ABOUT THE CANADIAN SCENE

1. Hardware/Software

The January 2, 1979, Globe and Mail claims that, in Toronto, the only thing that is stopping VCRs from selling out is the price. Retailers say interest is very high. But while hundreds of people stop to look at the machines, only a small percentage will actually buy.

"It's a plaything for people's leisure. It's like a good camera, there is a limited market. We don't sell a tremendous quantity, but for a new product over $1,000, it's selling extremely well," Sol Mandlsohn, President of Bay Bloor Radio, said.

Mr. Mandlsohn said he doesn't own one because he doesn't have the time to sit at home and watch television shows. "I bought a tape recorder and I rarely use it."

The machines (at a cost of $1,200 to $1,800) can be programmed to tape at a certain time. Some can tape at the same time every day for one week.

Tapes can stop or start and for people who hate watching commercials, there is a pause button. Television stations and advertisers have not addressed this question yet, but it could prove to be a contentious issue.

U.S. machine owners can also buy prerecorded tapes of movies and music events, and in the future, Canadians may have a wide selection of pre-recorded tapes to buy or rent.

People may consider the VCRs a luxury toy, "but do you really need a car either?" asked Paul Becigneul.

He bought one of the first machines on the market two years ago and today he calls it a "small miracle. It is expensive, but as far as what it can do it's very cheap. You can't replace what it can do."

Mr. Becigneul checks the television listings and then records any interesting musicals, documentaries, comedy or music specials while he is out. "Mostly documentaries. I like anything of historical value."

Having the VCR allows Mr. Becigneul to be more selective about what he watches. "There is junk everywhere you go. You don't have to go to TV to have junk. But I don't watch any sitcoms, I don't find them funny anymore. This allows me to be more selective."

It seems expensive, but Mr. Becigneul says it is a complete entertainment center. "Since 1962, I have only seen two films and they were both theatrical movies, I do have other interests, but it means the television is there at my disposition."

After viewing the shows at his leisure, Mr. Becigneul decides if he wants to keep the show on file or erase it and use the tape again.

Consumers can buy one to four-hour tapes that cost from $15 to $35. Retailers report the newer four-hour tapes are more popular.

VCRs have been used in commercial television for 20 years, but it wasn't until two or three years ago when the price of electronic technology dropped that it became feasible to build a home set.

The United States magazine, Consumer Reports, recommends the RCA Selectavision and the Panasonic Omnivision.

Frank Gajdemski, JVC Marketing, says JVC has no figures available on VTR/VCR sales, but indicates that the market is slow in Canada. JVC says VCR/VTR costs are high because of duty and taxes on the imports.

Mooney's Bay TV and Stereo Ltd. had exclusive marketing rights in Canada for the Magnavision system. They predicted that the video-disc would spell the end of records. Available in January 1980, the unit cost around $895 and was on display in Canada for the first time in the Ottawa store. However, now Mooney's Bay TV and Stereo Ltd. is looking around at other systems, particularly RCA Selecta-vision, which, priced at under $600, could be the consumer favourite. In terms of VTR/VCR, the largest quantities are Betas sold to consumers in the North West Territories.

The NFB predicts a software war and programming shortages. RCA/Magnavision/United Artists and major companies are joint hardware/software suppliers, but small companies must look for software (tape, disc) from producers. There is not enough material around. In Ottawa, Robertson, Pingle and Tilley stock about 400 titles.

An Ottawa Cablevision spokesperson, Allan Weatherall, feels that VTR/VCR will have a profound effect on the home entertainment market five years from now when prices drop. He sees video systems as being a novelty now.

RCA Canada displays a great amount of secrecy about sales figures and projections for VTR/VCR and vidisc, but RCA does admit that there are strong increases in sales from year to year. It claims to have between 25%-50% of the VTR/VCR market though Sony thinks RCA has 58% of the home video market.

A Robertson, Pingle & Tilley spokesperson, Steve Morling, says that right now in the Ottawa area the VCR market is strong with about 5,000 players (all brands) in both Beta and VHS formats. Program costs vary: if movies are duplicated in Canada the cost of a movie tape is about $89 (e.g. 20th Century Fox). If movies are imported, costs rise to $110 for a movie and $44 for cartoons. RPT has in stock about 400 movie videotapes for sale. Piracy is big: the synch signal on tape can be broken and it's easy to reproduce and distribute under-the-counter movie tapes. X-rated flicks are very popular and usually sold under-the-counter.

RPT sees the Philips/Magnavox/Pioneer disc system as a better investment for the consumer - over RCA - because with the RCA system, discs can be played only about 20 times and then they wear out. The price (around $600) will attract the consumer to the RCA player, but in the long run, purchase of programming to replace worn-out discs will cut into any initial saving. Most videophil es play tapes more than 15-20 times and tape swapping and lending are popular, so the RCA system would not be the wisest buy. RPT says the Magnavox (Magnavision) or Pioneer players hold up over time and discs never wear out. The drawback will be the initial investment of $1,100. The players will be available in the Ottawa area in Spring 1981. RPT predicts a good market for all types of video equipment.

Gordon MacGregor, National Sales and Marketing Manager, Sony Video Products, says that in Canada, RCA is the biggest competitor in VTR/VCR sales. In 1980, RCA VHS has about 58% of the market but MacGregor predicts a 50/50 split with Sony in 1981. He says the VTR/VCR market is climbing, with 11,000 Betamax units sold in 1980, and predictions of 15,000 Betamax units sold in 1981. He says that industry-wide, 1980 will see 42,000 units sold, and 1981, 50,000 units. He predicts gloom and doom for vidisc in Canada: too expensive both for players and discs and there is no recording facility on vidisc.

Statistics Canada figures (1978) show that the total Canadian imports of recorders/players, tape, video, except TV broadcast were 21,828 units, of which 21,580 were from Japan, representing in total $15,222,000, and from Japan, $15,017,000. No recent statistics are available, and the above totals are not sub-divided into consumer/industrial use.

TV Ontario is the second largest consumer of raw VTR in Canada. They say they may move into the general home video market in the near future and are looking at vidisc technology. They sell programming now only to schools, libraries, etc., and they lease VTRs to schools who can't afford to buy. They see VTR augmenting over-all production. They produce about 600 hours of programming per year now.

2. Rights

In Canada, rights are worked out on an individual basis between the producer and the distributor. Transferral or reproduction rights could be based on percentage or could be based on outright sale, with many variables thrown into a deal. Typically, a Canadian distributor will align with the U.S. distributors, buy the negative or print, transfer to master videotape and make copies in Canada, a financially feasible method of distribution. Reproduction rights for film and VTR/VCR/Vidisc must be indicated in the contract. Also, there have to be clearance rights to change a work around: the artist disclaims any rights after clearance.

3. Piracy - two examples:

(a) In Northern Canada, David Brough, described as a pirate and airwave anarchist, began Northern Access Network this way: using a tiny transmitter he has been broadcasting video tapes to local northern markets, providing the same service as cablecasters but without cable's capital cost. In Pickle Lake, for instance, televisions were useless: they were too far from stations and were primarily used for video games. Brough installed a 60-foot tower, a one-watt "flea power" transmitter (5-mile radius), a Sony Betamax videotape recorder, a video camera that allowed live broadcasting through an elementary switching device and antennas for towns people to connect to their TVs. The total cost was $2,000. Brough hired a station manager and returned to Toronto where he began taping television programs on another Betamax to ship to Pickle Lake for rebroadcasting. The legality of videotaping from television was still unsettled in Canada (and only last October was declared legal in the U.S.) Canadian network broadcasters regarded Brough's activities as piracy since he was not paying royalties for the shows he was stealing and rebroadcasting. In 1977, Brough began taping French programming in Ottawa for Longlac audiences and DOC seized the equipment.

At one point, Brough did his videotaping in a rooming house in downtown Toronto, using videotape salvaged from OECA. When he found it inconvenient to have to change the one-hour cassettes on the Betamax during taping, he devised a system of reels, pulleys, guides and tapes to create the first consumer video-tape machine capable of recording 10 hours of programming onto one 7½ inch reel. The 10-hour tapes cost him $30 while the cassettes cost $47 each. Now NAN spends close to $75,000 on videotapes. One comment on the affair: sometimes it's cheaper to tolerate bootlegging than it is to provide a legitimate service. What may bring action is the bootlegging of satellite signals which Brough may be heading into as well.

(b) In Ottawa, about 40 videocassettes of American-made movies were seized from a film club library operated by Mooney's Bay Television Ltd., as a result of an RCMP copyright investigation. The American Motion Picture Industry had complained to the RCMP that they were not receiving royalties for use of the movies. Mooney's Bay TV said most of the seized tapes were of films recorded from television or from satellites and they didn't think they were doing anything wrong. Their lawyer told them that the copyright laws date back to 1821 and don't apply in this case.

4. Trends

According to The Citizen, March 1979, TV executives, advertisers and movie people are terrified by VTR because program control falls into the hands of the consumer. The implications are staggering.

VTR units would allow the consumer to edit out commercials. Since these units are quickly finding their way into the homes of the upper middle class, the advertisers' most coveted market may soon be gone. VTR use in Canada presents political-cultural problems: with VTR units in every home, all gate-keeping measures may go for naught.

According to the Globe and Mail, May 24, 1980, the analogy has been made that television will segment, like magazines, to cover specific interest groups. It should not then be shocking to find that the funding for television may have to move in that direction too; pay for use, and content sponsored by advertising. The distinction will not be made between conventional "free" TV and pay TV, since the future conventional TV will be pay TV.

Canadian programming would have to be aggressively sold in world markets. Americans are buying more programming from the BBC, and as audiences segment more, focusing on a particular type of programming and becoming expert in it could become a profitable endeavor.

Canada can't ignore the coming technological changes in television, particularly the use of satellites and pay TV in its evolving sense. But Canada needs first to design policies so that Canadian programs will have a fair shot at appearing on television screens, both here and abroad.

Switzer Engineering Services, Toronto, says fragmentation effects of new technologies on television audiences will not be as drastic as parts of the broadcasting community have feared. Videodiscs or cassettes, home information systems and AM stereo radio will add to the fragmentation but none is expected to upset current broadcasting systems in the next decade. Consumer electronics manufacturers will create a large home video equipment business by 1981 to replace the saturated market for color TV sets. Home computer information systems will probably create new advertising opportunities but most viewers are unlikely to want to tie up a $1,000 color TV set just to play games or read through electronically displayed classified ads. Broadcasters will have to compete for the audience, but surveys indicate that in the long run there will be no significant diversion from broadcasting.

In the August 9, 1978 Globe and Mail, the following scenario was presented:

Videotape recorders will be a boon rather than a detriment to the television advertising industry and will in the end increase television's share of the advertising dollar at the expense of print media, in the opinion of a Toronto financial analyst.

> "Perhaps the single most important advantage the print medium has in competition with television is the flexibility it allows in the consumption of its product. Magazine and newspaper articles can be read when convenient to the consumer, not at a time deemed convenient by a television network",

according to William Gillespie of Brown, Baldwin, Nisker Ltd. The video cassette in one stroke removes that advantage, he said.

> "The most obvious victims of the revolution in television would be the specialty magazines - currently one of the hottest advertising media. Video recording renders the concept of time-slotted programs obsolete. For example, skiing programs will be watched at the viewer's convenience, thus attracting a much larger audience than programs that can only be seen at 4:30 on a Saturday afternoon."

Consequently, the ski enthusiast would no longer depend as heavily upon ski magazines to obtain information on the latest skiing techniques, Mr. Gillespie said. "Television clobbered the general interest magazines in the '60s. In the '80s, we believe that television will prove a substantial threat to the specialty magazines."

The hardware revolution that the television industry is undergoing includes the introduction of videotaping equipment, hi-fidelity stereo sound, large screens that can be hung on the wall like paintings and three-dimensional images.

"We find it probable that by 1985, a significant portion of U.S. households will have a large three-dimensional screen with hi-fidelity stereo sound. A recording system will be attached to this television set,which will allow the recording and playback of programs at the convenience of the viewer".

This should increase the intensity and length of viewing time. Fears in the advertising community that viewers will tape programs and edit out the commercials "are so short-sighted that future generations will find it amusing that it was not immediately recognized what a bonanza the tape recorders were to the advertising community."

Mr. Gillespie said recording offers several advantages, including:

-- Greater commitment by the viewer. The television fan no longer is watching only one of a small number of programs that come on in a narrow time frame, which often means selecting the program he dislikes the least, but any program that is broadcast at any time. The viewer will thus be watching his personalized schedule more closely.

-- More program diversification. The ratings-imperative makes it impossible for major networks to present programs aimed at specialized interests during prime time. The specialized advertiser will find it profitable to sponsor a program dealing with his area of interest at any time, confident that a large percentage of his target audience would record the show for later viewing.

"The advertiser would no longer be forced to pay prime time advertising rates and, at the same time, he would be able to capture a much larger audience because the program would not be forced into fringe area time slots." The test of a program's success would not be the percentage of the television audience watching, but rather the percentage of heavy consumers of products captured, he said.

"Obviously this will allow television to compete much more effectively for the advertising of local specialty stores and national specialty products."

The extensive use of recorders will inevitably lead to shorter commercials. "If networks continue to bombard the viewer with two to three minutes of commercial announcements at a stretch, the consumer would be able to retaliate by putting the tape machine on fast-forward and skip over the commercials."

The networks will have to adjust their marketing techniques and the logical strategy would be shorter commercials. "In our opinion, commercial breaks will largely consist of three 10-second commercials, brief enough to prevent consumer deletion."

Shorter commercial breaks would reduce the annoyance factor of commercials and should leave the consumer more receptive to the message, Mr. Gillespie said. "For those who claim that 10-second spots cannot possibly be as effective as 30-second spots, we suggest that this was exactly the argument advanced against 30-second spots when they replaced 60-second spots."

Besides, his lengthy practice in absorbing commercial messages has enabled the consumer to grasp the central point in a much shorter time.

Newspapers will also continue to suffer from television competition, Mr. Gillespie said. In the 1960s and '70s, afternoon newspapers were hurt by television's late afternoon news, and afternoon circulation has been flat since 1961.

In the 1980s, morning newspapers will suffer, since news and sports highlights taped in the early hours can be played back during breakfast.

Newspapers accustomed to early morning sports dominance will have to compete with replays of the highlights of the previous evening's contests. Moreover, specialized programming will also allow television to compete more effectively for local advertising by specialty shops, a field currently dominated by newspapers.

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INDUSTRY GROWTH

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Wertheim & Co., Inc., New York (Industry Commentary, April 20, 1977) present the following scenario for figuring potential video disc sales:

> Numerous assumptions must be made in order to calculate the potential sales of videodisc players and videodiscs themselves. Although it seems too early to make specific earnings estimates, in order to put sales and earnings potential into some perspective for the participants, the following estimates need to be made:
>
> 1. Percentage of homes owning a videodisc player:
>   Reference: There are 72 million TV homes in the U.S.; 60 million have color. Total TV sets in use approximate 127 million; just under half are color. Total phonographs in use approximate 75 million.
>
> 2. Pattern of growth of videodisc player sales to maturity:
>   Reference: Color TV sales doubled each year during the first five years; monochrome tripled each year. Following this, sales became cyclical, with total player population of monochrome reaching saturation some ten years later. (See Table 1 below for the progress of color and b/w TV sales.)
>
> For Hardware Producers
>
> 3. Price of Hardware:
>   Reference: Wholesale prices expected originally around \$375-\$475, but should drop. In color TV's case, \$400 starting wholesale prices dropped to \$350-\$375 after five years (including consoles and combinations).
>
> 4. Profit margin on Hardware:

	Pretax Margins (%)	
	1976	Best Year 1970-76
Zenith	8.0%	11.9%
Sony	13.8	15.8
RCA (Consumer Electronics)	6.0	10.7

5. Share of Market:

   Reference: See Table 1 below for market share of color and b/w television.

For Software Producers

6. Number of albums purchased per year by player owners.

7. Price per album:

   Reference: $4.00 at low end; $15-$18 at high. Retail markup on audio discs is approximately 100% although they are widely discounted by 25%.

8. Profit margin per album:

   Reference: Phonograph records' pretax profits for well-managed companies typically range from 12% to 19%.

9. Share of Market:

   Reference: See Table 2 below for other entertainment software market shares. Non-entertainment markets (including size: some think larger than entertainment ultimately).

If a pattern parallel to color TV sales were to hold true for videodiscs, and only 15% of TV homes were to own videodisc players by 1984, there could be 11 million players then in existence, with annual unit sales in the 4-5 billion range. This would then represent $2.0-$2.5 billion in annual retail sales without any inflation adjustment. Saturation levels at that time would still be low.

Wertheim feel that the disc itself is the razor blade of the business. Using a simple example - one not at all designed as an estimate of unit sales - if the average videodisc-owning family were to purchase twelve discs at $11 each in the first year of ownership, and eight each year thereafter, software sales would reach $2.2 billion by the year saturation reached 30% of TV homes, again with no inflation adjustment. If one adds in the educational market, presumably at significantly higher prices, and the advertising and reference markets, the total expands further.

In figuring profitability, royalties should not be excluded. Typical royalties in manufacturing run around 3% of the factory cost of a device, and videodisc players should be no exception. The 3% may not apply to the full cost of the player. As far as Wertheim know› RCA owns its patent and MCA and Philips will share royalties on theirs.

TABLE I*

Total U.S. Sales of Color
Television Receivers, At Factory 1954-1969

Year	Units (000)	Dollars (000)
1954	5	$ 2,000
1955	20	10,000
1956	100	46,000
1957	85	37,000
1958	80	34,000
1959	90	37,000
1960	120	47,000
1961	147	56,000
1962	438	154,000
1963	747	258,000
1964	1,404	488,000
1965	2,694	959,000
1966	5,012	1,861,000
1967	5,563	2,015,000
1968	5,972	2,047,000
1969	5,744	1,961,000

Total U.S. Sales of Monochrome
Television Receivers, At Factory 1946-1953

Year	Units (000)	Dollars (000)
1946	6	$ 1,000
1947	179	50,000
1948	970	226,000
1949	2,970	574,000
1950	7,355	1,397,000
1951	5,312	944,000
1952	6,194	1,064,000
1953	6,870	1,170,000

* p. 11

TABLE 2*

Estimated Market Share of Principal
Television Manufacturers, 1976 Model Year
(Percent)

	Color	Monochrome
Zenith	23%	18%
RCA	20	14
Sears	9	9
Sony	7	4
Magnavox	6.5	2
GE	5.5	11
Quasar	5	5
Sylvania	4.5	3
Admiral	3.5	5.7
Panasonic	2.5	8
Philco	1.5	3
Others	12	17.3

Growth in the number of consumer audio and video tape recorders/players sold in the U.S., 1954-1976, is shown in Table 3** on page 113.

* p. 17.

** Christopher H. Sterling and Timothy R. Haight, The Mass Media (New York: Praeger, 1978) p. 358.

TABLE 3

Note: All figures are in thousands.

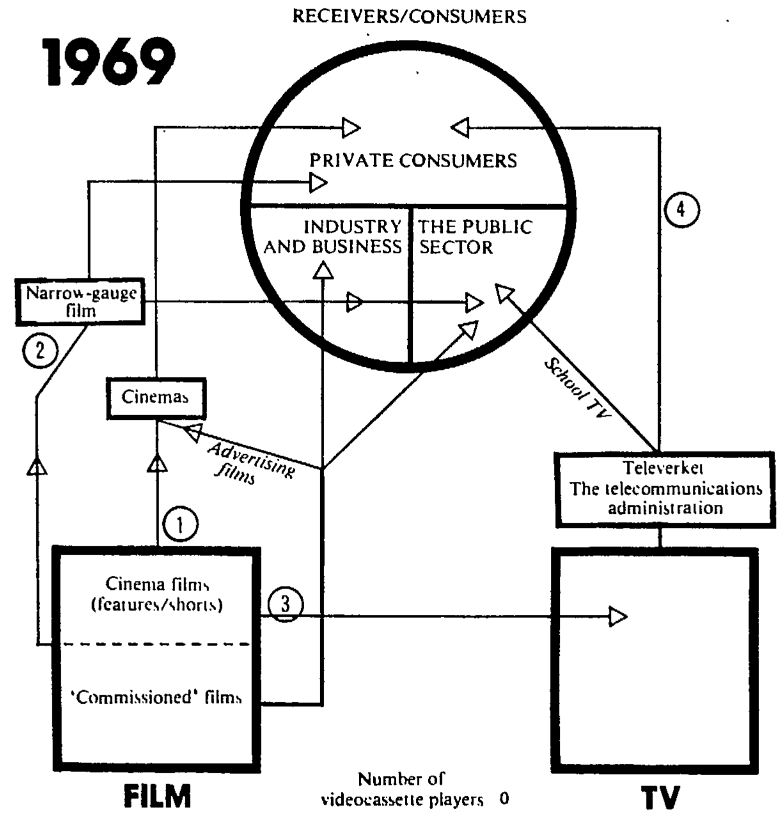
	Number of Audio Tape Units	Number of Automobile Tape Player Units	Number of Videotape Units	Total Number of Tape Units Sold
1954	100	--	--	100
1955	360	--	--	360
1956	400	--	--	400
1957	500	--	--	500
1958	400	--	--	400
1959	400	--	--	400
1960	425	--	--	425
1961	1,166	--	--	1,166
1962	1,675	--	--	1,675
1963	2,841	--	--	2,841
1964	3,561	--	--	3,561
1965	3,445	N/A	N/A	3,445
1966	3,675	N/A	N/A	3,675
1967	4,581	N/A	N/A	4,581
1968	6,168	1,224	9	7,401
1969	8,759	2,527	13	11,299
1970	11,733	2,779	24	14,536
1971	13,548	2,739	29	16,316
1972	18,136	3,641	42	21,819
1973	17,651	4,687	272	22,610
1974	13,575	4,983	138	18,696
1975	10,753	4,903	162	15,818
1976	16,807	9,136	291	26,234

By 1978, international market shares by VTR/VCR format were as follows:*

	Japan	U.S.	Western Europe
Beta	40%	34%	9%
VHS	50	58	38
VCR/SVR	--	--	48
Others	10	8	5

* The Globe and Mail, June 18, 1979, pp. B7ff.

One country's attempt to diagram industry growth and map the changing relationships in film, TV and video was conceived by Lasse Svanberg in Sweden. The diagrams and summarised text of Svanberg's book, Den Elektroniska Hästen (The Electronic Horse) appeared in Intermedia (March, 1980):



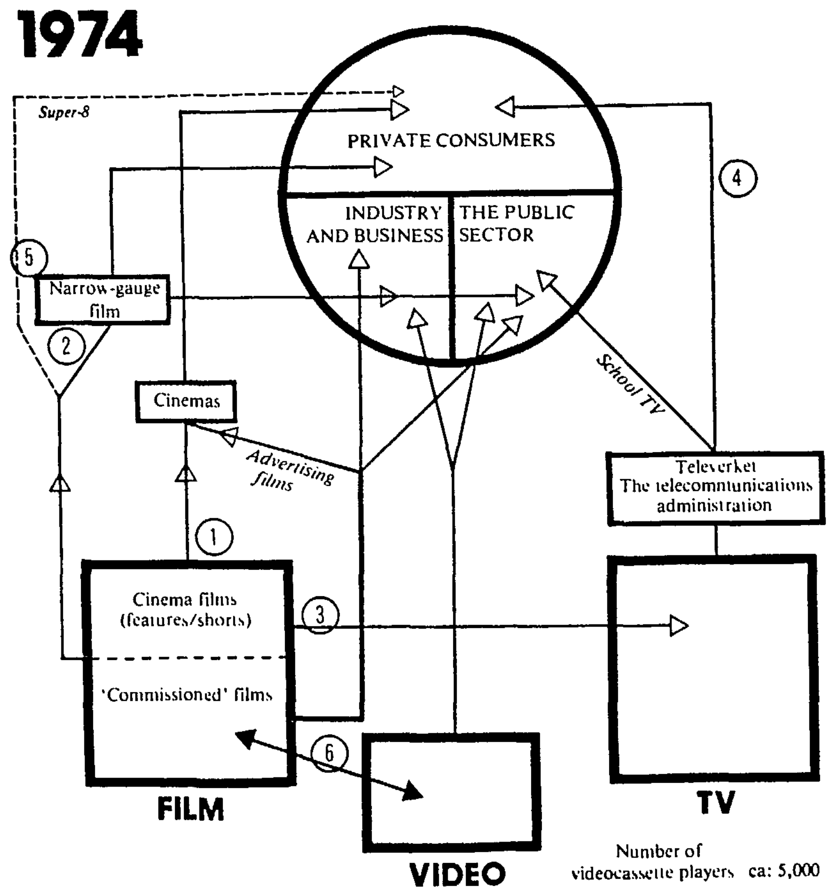
1969

In 1969 the relationships between film, TV and the audience are relatively easy to portray. The film industry can be divided into two sectors: feature films, including shorts, which are exhibited in cinemas, and 'commissioned' films (industrial, advertising, PR, educational, scientific and information films) which are commissioned for a specific audience and primarily directed towards industry and business and the public sector. In Sweden as elsewhere industrial and commissioned films outnumber feature films. This balance comes as a surprise to many because the mass media give much more publicity to feature films; commissioned films remain the silent majority of the industry.

Films are distributed on 35 mm to cinemas (1) and on narrow-gauge stock (2) through film clubs, associations, voluntary groups, etc. Another distribution channel is through television (3).

Broadcasting in Sweden is operated by Sveriges Radio, a public service enterprise, which reaches all private consumers, by over-the-air distribution through the the telecommunications system (4). It produces in three modes: live, film and tape.

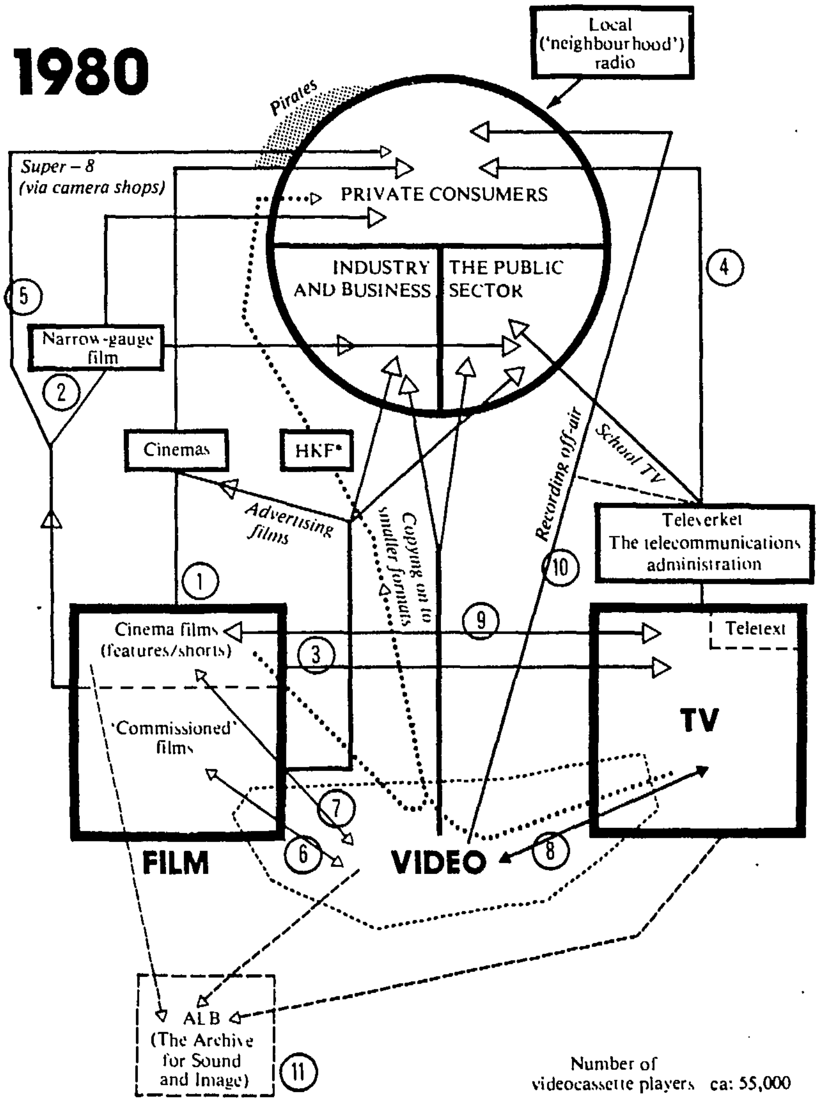
By the end of the sixties the cinemas and television industries are beginning to fight for the private consumer's time, attention and money. The spread of television has exacerbated the decline and closure of many cinemas. During 1963-9 the number of cinema tickets sold diminished by 60%.



1974

The availability of Super-8 stock opens up a new channel of film distribution (5). But the keynote of the mid-seventies is the introduction of video cassettes, after much hysterical speculation. (I use video to describe all kinds of electronic content that is shown on a TV screen but not distributed over the air).

A number of companies and groups (about a dozen) begin to produce and distribute video for cassettes. At this time, video is mainly oriented towards the business and public sectors. In functional terms it is closest to the commissioned film (6).



*The Swedish Merchant Marine Culture and Leisure Council

1980

Today, the situation is much more complicated. It is no longer possible to describe the video industry as something separate from film and television. An increasing number of commerical enterprises begin to exploit video but, at the same time, they are closely involved in film and television, as are film and television industries in video. (The Europa Film Studio, one of Sweden's largest film units, has an expanding video department and a film-to-tape transfer service (7), and the Svensk Filmindustri is experimenting with video cinemas and electronic projection.) The production of film for cinema exhibition decreases, partly because production costs have doubled since 1974.

In 1979 Sveriges Radio (8) was divided into five corporations: an umbrella corporation, which takes on the name, Sveriges Radio, and four autonomous corporations for television, national radio, local radio and educational broadcasting. The television corporation uses video both for recording and playback and for various internal purposes (viewings, sales). Generally, video is increasingly favoured over film. The educational broadcasting corporation continues to expand its video facilities, and operates a pilot cable project in Kiruna.

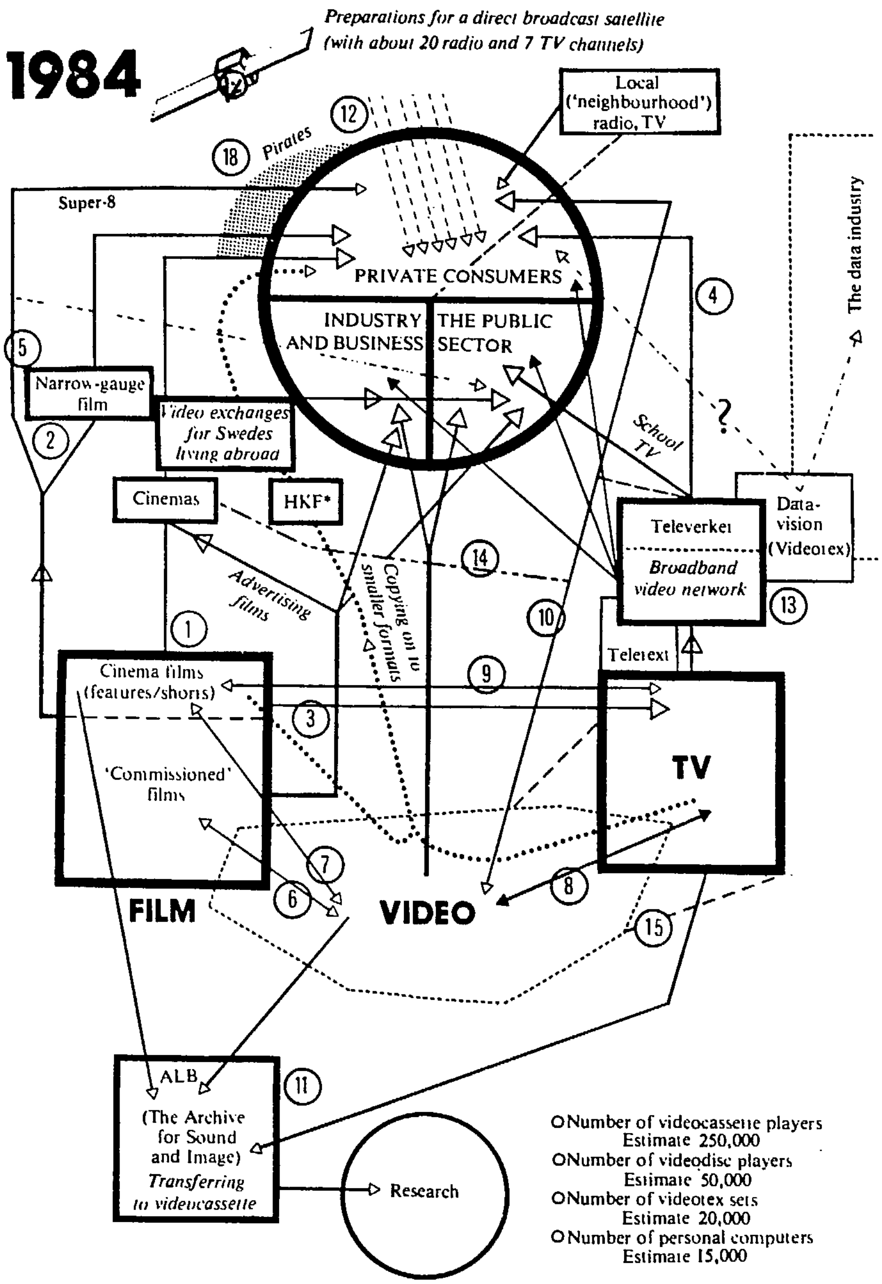
The relationship between Sveriges Radio and the film industry has been changed by the establishment of something known as the 'I' (for investment) fund(9). The I-Fund allows SR to invest about Kr. 7.5 million (815,000 pounds sterling) annually in the co-production of Swedish films. The point is to subsidise 'quality' Swedish films that may have difficulty in finding production finance. In return for its investment, SR has the right to broadcast the film 18 months after the theatrical release, without charge.

At the same time as the TV broadcasters lose their dominant position, the telecommunications authority (the Televerket) begins to claim a key position in the emerging electronic society. It installs a broadband coaxial network, and offers services to the business and public sectors. The services include videophone, teleconferencing, and videotex. A direct broadcast satellite system (Nordsat) is discussed in each Nordic country and by the Nordic Council.

Consumer video (10) becomes a market reality, thanks to the new long-play formats of the VHS, Betamax and VCR Long-Play systems. In the sale of players and cassettes the consumer market begins to overtake the institutional market.

A new and unpredictable factor is pirate production and distribution of video and film. The pirating of both audio and video material has become a major problem in the USA and throughout Europe.

The Archive for Sound and Image was set up in 1978 (11). Every producer of an audio or video product (gramophone records, films, video cassettes, radio and TV programmes) must deposit one copy at the archive.



*The Swedish Merchant Marine Culture and Leisure Council

1984

In 1984 the information environment is a thicket of interacting industries, functions and agencies. A major factor is the Nordic satellite system (12), whose preparations are now in full swing. The satellite results in a dramatic increase in TV production, and in the sale of long-play video cassette equipment for recording programmes off-air.

Regular broadcast videotex (teletext) services are well established and have been supplemented by telephone-based videotex (13). Initially, videotex was directed towards the business and public sectors, but the private sector is increasingly involved.

The cinema business shows a marginal decrease. The exhibitors counteract this trend by diversifying into video; perhaps by selling video cassettes and discs of feature films at the cinemas (14).

The improvement of video tape technology, especially with helical scan, means that the tape techniques and methods of the broadcasters and the video industry are increasingly compatible (15).

The spread of personal computers encourages amateur (ham) computer users and even computer pirates. Data is stolen or surreptitiously copied; there are the beginnings of 'alternative' networks of mobile two-way radio, micro computers, video, etc.

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MEDIA CONGLOMERATES

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In the U.S., the extent to which multimedia firms have acquired holdings in several different media has been researched by Christopher H. Sterling and Timothy R. Haight in The Mass Media: Aspen Institute guide to communication industry trends. Their findings are presented on the following pages:

U.S. Companies with Holdings in Three or More Media Industries, by Number and Category of the Holdings, 1977.

Companies with Holdings in Six or More Media Industries

Name of Company	Book Publishing Holdings	Newspaper Publishing Holdings	Magazine Publishing Holdings	Film Production and Movie Theatre Holdings	Broadcasting Station Holdings	Cable System Holdings	Music Publishing and Recording Holdings	Other Media Holdings	Fortune Corporate Ranking, 1976[a]
American Broadcasting Companies, Inc.	1	--	5	1 Film Production Company 277 Movie Theatres	14 Radio, 5 TV Stations	--	10 Record Labels	A Radio/TV Network	170
CBS, Inc.	9	--	20	Educational Film Production	14 Radio, 5 TV Stations	20% of Some Canadian Systems	3 Recording Companies	A Radio/TV Network	102
Cox Broadcasting Corporation	2	17	16	Film Distribution	10 Radio, 5 TV Stations	36 Operating Systems	--	Television Production	846
Metromedia, Inc.	1	--	--	--	12 Radio, 6 TV Stations	--	Music Publishing	Outdoor Advertising Direct Mail Advertising Television Production	562
The New York Times Co.	3	15	8	Educational Film Production	2 Radio, 1 TV Stations	--	Educational Recordings	1 News Service A Data Bank	394
R.C.A. Inc.	6	--	--	Documentary Film Production	8 Radio, 5 TV Stations	--	1 Record Subsidiary	A Radio/TV Network Radio/TV/Audio Equipment Manufacturing A Common Carrier System Electronics Manufacturing Videodisc Manufacturing	31

Name of Company	Book Publishing Holdings	Newspaper Publishing Holdings	Magazine Publishing Holdings	Film Production and Movie Theatre Holdings	Broadcasting Station Holdings	Cable System Holdings	Music Publishing and Recording Holdings	Other Media Holdings	Fortune Corporate Ranking, 1976
Time, Inc.	5	17	5	Time-Life Films	1 TV Station	1 System	Record Production	Television Production Pay-Cable Film Distribution	217
Times-Mirror Co.	10	5	4	--	2 TV Stations	17 Operating Systems	--	50% Ownership of a News Service	232
Warner Communications, Inc.	3	--	3 Magazine Distributors	Film Production	--	147 Operating Systems	7 Record Labels	Television Production Video Computer Games (Atari, Inc.)	261
The Washington Post Co.	1	4	1	--	1 Radio, 4 TV Stations	--	--	Television Production 50% Ownership of a News Service	452
Companies with Holdings in Five Media Industries									
Doubleday & Co.	9	--	6	--	7 Radio Stations	1 System	--	A Specialized TV Network	--
Filmways, Inc.	3	--	11	Feature Film Production	--	--	1 Record Company	Television Production	998
MCA, Inc.	3	--	--	4 Feature Film Production/ Distribution Companies	--	--	3 Record Companies	Television Production Videodisc Manufacturing	267
General Electric Co.	--	--	--	Film Production	8 Radio, 3 TV Stations	11 Operating Systems	--	Television Production Radio/TV/ Audio Equipment Manufacturing	9
Media General, Inc.	--	7	1	--	2 Radio, 1 TV Station	1 System	--	Newsprint Production	673

Name of Company	Book Publishing Holdings	Newspaper Publishing Holdings	Magazine Publishing Holdings	Film Production and Movie Theatre Holdings	Broadcasting Station Holdings	Cable System Holdings	Music Publishing and Recording Holdings	Other Media Holdings	Fortune Corporate Ranking, 1976
Playboy Enterprises, Inc.	1	--	2	Theatres Film Production	--	--	1 Record Company	Television Production Book Club	674
Starr Broad-casting Corp.	2	--	1	14 Theatres	14 Radio 4 TV Stations	--	1 Record Distributor	--	--
Companies with Holdings in Four Media Industries									
Avco Corp.	--	--	1	Film Production	3 Radio Stations	--	1 Record Company	--	305
Capital Cities Communications, Inc.	1	13	6	--	13 Radio, 6 TV Stations	--	--	--	641
Combined Communications Corp.	--	1	--	--	7 Radio, 7 TV Stations	--	--	Television Production Outdoor Advertising	702
Gulf & Western, Inc.	7	--	--	4 Feature Film Production/ Distribution Companies	--	--	Music Publishing Company	Television Production	57
The Hearst Corp.	1	9	26	--	7 Radio, 3 TV Stations	--	--	--	--
Columbia Pictures Industries, Inc.	--	--	--	Film Production	5 Radio, 2 TV Stations	--	1 Record Company	Television Production	488
McGraw-Hill, Inc.	5	--	73	2 Educational Film Companies	4 TV Stations	--	--	--	323
Newhouse Newspapers	--	22	5	--	7 Radio, 6 TV Stations	14 Opera-ting Systems	--	--	--
Teleprompter Corp.	--	--	--	Film Distribution	--	123 Opera-ting Systems	1 Business Music Company (Musak)	Television Production	--
Twentieth Century-Fox Film Corp.	--	--	--	Feature Film Production	3 TV Stations	--	Music Publishing and Records	Television Production	472

Name of Company	Book Publishing Holdings	Newspaper Publishing Holdings	Magazine Publishing Holdings	Film Production and Movie Theatre Holdings	Broadcasting Station Holdings	Cable System Holdings	Music Publishing and Recording Holdings	Other Media Holdings	Fortune Corporate Ranking, 1976
Viacom International Inc.	--	--	--	Film Distribution	--	32 Communities Served	2	Television Production	--
WGN Continental Broadcasting Co.	--	6	--	--	4 Radio, 4 TV Stations	13 Communities Served	--	Television Production	--
Westinghouse Electric Corp.	--	--	--	--	9 Radio, 5 TV Stations	7 Operating Systems	Recorded Educational Materials	Consumer Electronics, Phonographs, Etc.	22
				Companies with Holdings in Three Media Industries					
H & E Balaban Corp.	--	--	--	A Theatre Chain	4 TV Stations	1 System	--	--	--
Bonneville International Corp.	--	1	--	--	11 Radio, 2 TV Stations	1 Operating System	--	--	--
Cadence Industries	1	--	2	A Theatre Chain	--	--	--	A Common Carrier System	--
Chronicle Publishing Co.	--	1	--	--	2 TV Stations	6 Operating Systems	--	--	--
The Daily Press, Inc.	--	2	--	--	2 Radio Stations	2 Systems	--	--	--
Dakota-North Plains Corp.	1	--	1	--	2 Radio Stations	--	--	--	--
Dow Jones & Co. Inc.	2	23	1	--	--	--	--	Business Information Systems	555
Dun & Bradstreet Companies, Inc.	5	--	23	--	5 TV Stations	--	--	--	--
William R. Dunaway	--	2	2	--	2 Radio Stations	--	--	--	--
Esquire, Inc.	3	--	1	Education Films	--	--	--	--	--

Name of Company	Book Publishing Holdings	Newspaper Publishing Holdings	Magazine Publishing Holdings	Film Production and Movie Theatre Holdings	Broadcasting Station Holdings	Cable System Holdings	Music Publishing and Recording Holdings	Other Media Holdings	Fortune Corporate Ranking, 1976
Gannett Co.	1	55	--	--	2 Radio, 1 TV Station	--	--	Polling Company (Louis Harris, Inc.)	426
General Tire and Rubber Co.	--	--	--	A Theatre Chain	13 Radio, 4 TV Stations	42 Operating Systems	--	--	768 (RKO General Only)
Greater Media, Inc.	--	1	--	--	14 Radio Stations	3 Systems	--	--	--
W.F.Hall Printing Corp.	Printing	--	Printing	Educational Films	--	--	--	Educational Television Production	903
Harcourt Brace Jovanovich	11	--	74	2 Educational Film Companies	--	--	--	--	560
Illini Publishing Co.	--	1	2	--	1 Radio Station	--	--	--	--
The Journal Co.	--	2	--	--	2 Radio, 1 TV Station	2 Systems	--	--	--
Landmark Communications Inc.	--	6	--	--	3 Radio, 2 TV Stations	41 Communities Served	--	--	--
Lee Enterprises, Inc.	--	19	--	2 Film Companies	6 Radio, 4 TV Stations	--	--	--	--
Macmillan, Inc.	12	--	Distribution	Film Distribution	--	--	--	--	376
McClatchy Newspapers	--	3	--	--	7 Radio, 2 TV Stations	12 Communities Served	--	--	--
McCracken Newspapers	--	6	--	--	2 Radio Stations	1 System	--	--	--
Mickelsen Media, Inc.	--	3	--	--	2 Radio Stations	3 Operating Systems	--	--	--
Minneapolis Star-Tribune Co.	--	2	--	--	2 Radio 2 TV Stations	1 System	--	--	--

Name of Company	Book Publishing Holdings	Newspaper Publishing Holdings	Magazine Publishing Holdings	Film Production and Movie Theatre Holdings	Broadcasting Station Holdings	Cable System Holdings	Music Publishing and Recording Holdings	Other Media Holdings	Fortune Corporate Ranking, 1976
Providence Journal-Bulletin	--	1	--	--	2 Radio Stations	13 Operating Systems	--	--	--
E.W. Scripps Co.	--	17	--	--	3 Radio 5 TV Stations	--	--	United Press International	--
Sonderling Broadcasting Corp.	--	--	--	56 Theatres	11 Radio, 1 TV Station	--	--	TV Production Radio/TV Distribution	--
South Bend Tribune	--	1	--	--	2 Radio, 2 TV Stations	10 Communities Served	--	--	--
Southland Publishing Co.	--	1	--	--	3 Radio Stations	2 Systems	--	--	--
Stauffer Publishing Co.	--	18	--	--	8 Radio, 1 TV Station	1 System	--	--	--
Steinman Stations, Inc.	--	1	1	--	2 Radio, 2 TV Stations	--	--	--	--
Transamerica Corp.	--	--	--	Film Distribution	1 Radio, 2 TV Stations	--	12 Labels	--	--
Triad Stations, Inc.	--	1	--	--	4 Radio Stations	3 Systems	--	--	--
Tribune Publishing Co.	--	1	--	--	2 Radio Stations	9 Operating Systems	--	--	--
Truth Publishing Corporation	--	1	--	--	2 Radio Stations	4 Communities Served	--	--	--
UA-Columbia Cablevision/UA Theatre Circuit	--	--	--	604 Theatres	--	34 Operating Systems	--	Television Production	--
WOMETCO Enterprises, Inc.	--	--	--	Film Processing 48 Theatres	1 Radio, 3 TV Stations	13 Operating Systems	--	--	667

U.S. Companies with Three or More Holdings in Two Media Industries, by Number and Category of the Holdings, 1977

Name of Company	Publishing Holdings	Broadcasting Station Holdings	Other Media Holdings
Donrey Media Group	33 Newspapers	5 Radio, 3 TV Stations	--
Fuqua Industries	--	2 Radio, 3 TV Stations	198 Movie Theatres Film Production/ Processing Company
General Cinema Corp.	--	2 Radio, 1 TV Station	663 Movie Theatres Film Production Company
Harte-Hanks Newspapers	26 Newspapers	4 TV Stations	--
Jefferson-Pilot Corp.	9 Newspapers	9 Radio, 2 TV Stations	--
Knight-Ridder Newspapers	53 Newspapers	8 Radio, 1 TV Station	--
Lindsay-Schaub Newspapers	10 Newspapers	4 Radio Stations	--
MaNaughton Stations	4 Newspapers	8 Radio Stations	--
Morgan Murphy Stations	6 Newspapers	2 Radio, 5 TV Stations	--
Multimedia, Inc.	7 Newspapers	12 Radio, 5 TV Stations	--
Park Broadcasting, Inc.	9 Newspapers	13 Radio, 7 TV Stations	--
Post Corporation	14 Newspapers	3 Radio, 4 TV Stations	--
Sammons Communications, Inc.	--	4 Radio Stations	50 Operating Cable Systems
Seaton Stations	8 Newspapers	4 Radio, 1 TV Station	--
State Telecasting Co.	6 Newspapers	3 TV Stations	--
Storer Broadcasting Co.	6 Newspapers	6 Radio, 7 TV Stations	Cable Systems Serving 61 Communities
Wehco Media, Inc.	9 Newspapers	4 Radio, 1 TV Station	--
Xerox Corp.	5 Book Publishers 4 Magazines	--	--

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FINANCIAL OPERATIONS OF SOME

HARDWARE/SOFTWARE COMPANIES

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Columbia Pictures

Columbia reported a net income of $7.2 million on revenues of $164.3 million for 13 weeks ended December 29, 1979, up from net $6.9 million on revenues of $122.5 million in the comparable 13 weeks in 1978. For the 26 weeks ended December 29, 1979, Columbia's net was $16.2 million on revenues of $297.0 million vs. net of $18.1 million on revenues of $242.1 million in the year earlier 26 weeks. No data is available for specific areas, i.e. home video program revenues.

Fotomat

In 1979, Fotomat reported unsatisfactory operating results because of litigation with franchises, a bad summer in the graphics business and high start-up costs for "drive-thru" movies. It completed arrangements with Citibank and Crocker National Bank for $25 million in short-term loans, of which $15 million is payable in installments through September, 1980 and $10 million in installments through January, 1981. The previous $23 million debt was included in the new agreement. "Drive Thru Movies" are expected to gross $15-$20 million (December 1979 - December 1980).

MCA

MCA reported net income for 1979 including extraordinary income of $39.7 million was $178.7 million, a 39.2% rise. Revenues were $1.27 billion vs. $1.12 billion in 1978. Fourth quarter net was up 34.5% to $44.4 million on revenues of $387.7 million, 16.5% ahead of the 1978 final quarter. MCA said its filmed entertainment division had record pretax operating income of $174.3 million, 9% above the 1978 level. MCA has substantially increased its film production and has completed, or has in production, the largest film inventory in its history. No data on specific home video program revenues is available.

Paramount

Gulf/Western, reporting record first half sales for fiscal 1980 of $2.89 billion said Paramount turned in a strong performance for its Leisure Times Group (as did Simon & Schuster). Paramount's profits rose 14 per cent to $131.7 million.

Sony

Consolidated earnings advanced 343 per cent in its first quarter ended January 31, 1979, rising to the equivalent of $78.3 million from $17.7 million in the year earlier first quarter. The gain was linked to strong reception of Sony products, especially video equipment. Sales were ahead 48 per cent to $889.9 million. Sales of VCRs were up 81 per cent and accounted for 21 per cent of Sony sales. Sony said it would increase output of Betamax players from 70,000 to 95,000 units per month by September, 1980.

Sony's net income per ADR (American Depository Receipt) for the current fiscal year (ending October 31, 1980) should be equivalent to $1 per share or triple the 34 cents per ADR earned in fiscal 1979. Sony projects a fiscal 1980 sales increase of 25-30 per cent above the $2.69 billion reported in 1979. It expects second quarter earnings to continue the trend established in the first quarter when net income was 343 per cent above 1979. In the second quarter of 1979 fiscal year, Sony reported a net of $15.7 million (seven cents per ADR) on sales of $651.8 million.

Time

In 1980, Time Inc. cites its video group as one of the three operations principally responsible for its 1979 profit increase. Video's higher earnings are attributed to the addition of the American Television and Communications Corp. (ATC) and the growth of Home Box Office. The company net was ahead 21 per cent to $144 million for 1979 while revenues rose 40 per cent to $2.5 billion. Time says half the revenue increase comes from inclusion of full-year results of ATC and Inland Container Corp., both acquired by Time Inc. in November 1978. No data is available on specific home video program revenues.

Twentieth Century-Fox Film

In 1980, Fox reported a 1.9 per cent decline in net income in 1979, when the net was $57.3 million, off from $58.4 million in 1978. Revenue was up 8.4 per cent to $678.4 million. The fourth quarter net rose 54 per cent to $10.8 million on a 16 per cent gain in revenue, coming in at $182.2 million. Earnings from theatrical showings dropped for both the fourth quarter and the year, but revenues from features licensing to television rose to $20.6 million in 1979 from $2.2 million a year earlier. Fourth quarter revenue from such licensing was $7.5 million vs. $1.6 million in the last quarter, 1978. The current Fox budget for movie production is $75 million. No data is available on specific home video program revenues.

United Artists

Transamerica, parent of United Artists, says UA reported the highest revenues from theatrical film rentals in its history in 1979 although earnings were down due to increased film production and promotion costs. Transamerica's net rose to $240.2 million from $209.7 million in 1978; consolidated revenues were $4.0 million in 1979 vs. $3.5 billion in 1978. No data is available on specific home video program revenues.

WCI

WCI reported record 1979 revenues and income. Revenues were ahead 32 per cent to $1.6 billion from $1.2 billion in 1978 and income from continuing operations, before gain on the sale of 50 per cent of its cable operations to American Express, was also ahead 33 per cent to $109.1 million. Fourth quarter income from continuing operations, prior to gain on sale, was up 28 per cent to $33.7 million while revenues were $468.1 million vs. $387.3 million in 1979 final quarter. Results include equity in net income of the joint Warner/Amex venture which in 1979 was 89 per cent higher than the 1978 figure. Revenues for the joint venture, no longer consolidated, rose 23 per cent to a new record level of $81.3 million. No data is available on specific home video program revenues.

Financial operations of publicly owned companies with interests in the motion picture industry or other media, 1977, are shown in the Table on the next page, from, Who Owns the Media? (Benjamin Compaine, editor), page 204.

	Revenue (millions)	Net Income (millions)	Assets (millions)
Eastman Kodak Company	$5,967.0	$643.4	$5,904.2
RCA Inc.	5,880.9	247.0	4,351.7
Gulf & Western Industries Inc.[1]	3,643.0	150.3	4,159.1
Loews Corporation	3,237.9	177.4	6,983.4
CBS Inc.	2,776.3	182.0	1,518.1
American Broadcasting Cos. Inc.	1,616.9	109.8	963.1
Avco Corporation[2]	1,537.9	116.6	4,125.6
Time Inc.	1,249.8	90.5	1,053.3
Warner Communications Inc.	1,143.8	70.8	1,071.1
Times Mirror Co.	1,143.7	96.1	843.3
MCA Inc.[3]	877.6	95.1	876.8
Knight-Ridder Newspapers Inc.	751.7	61.2	563.2
McGraw-Hill Inc.	659.0	51.4	549.8
Fuqua Industries Inc.	631.7	18.1	422.8
Walt Disney Productions	629.8	81.9	964.5
Gannett Co.	557.9	69.4	529.0
The New York Times Co.	509.5	26.1	297.0
Twentieth Century-Fox Film Corp.	501.5	50.8	433.2
United Artists Corporation[4]	474.1	26.6	441.0
General Cinema Corporation	465.1	20.2	258.4
Washington Post Co.	436.1	35.5	278.6
Columbia Pictures Industries Inc.	390.5	34.6	336.0
Dow Jones & Co.	317.3	39.0	221.9
Metromedia Inc.	300.6	32.1	337.7
Metro-Goldwyn-Mayer Inc.	288.5	33.2	426.7
Wometco Enterprises Inc.	225.1	12.7	203.6
Cox Broadcasting Corporation	186.4	25.5	284.5
United Artists Theatre Circuit Inc.	147.0	4.2	110.9
Technicolor Inc.	126.9	3.9	82.7
Filmways Inc.	125.3	2.7	68.0
Viacom International Inc.	58.5	5.6	117.2
Cinerama Inc.	57.5	.2	67.8
Allied Artists Industries Inc.	53.2	(2.1)	28.6
American International Pictures Inc.	51.2	3.3	50.9
First Artists Production Co. Inc.	41.9	3.0	12.6
Commonwealth Theatres Inc.	33.9	1.6	21.9
Cablecom-General Inc.	29.2	4.0	45.3
Inflight Services Inc.	22.6	(2.0)	21.0
Movielab Inc.	22.6	.9	15.8
Cinema 5 Ltd.	8.3	(.7)	8.1

[1] Parent of Paramount Pictures Corporation.

[2] Parent of Avco-Embassy Pictures Corporation.

[3] Parent of Universal.

[4] Subsidiary of Transamerica Corporation.

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