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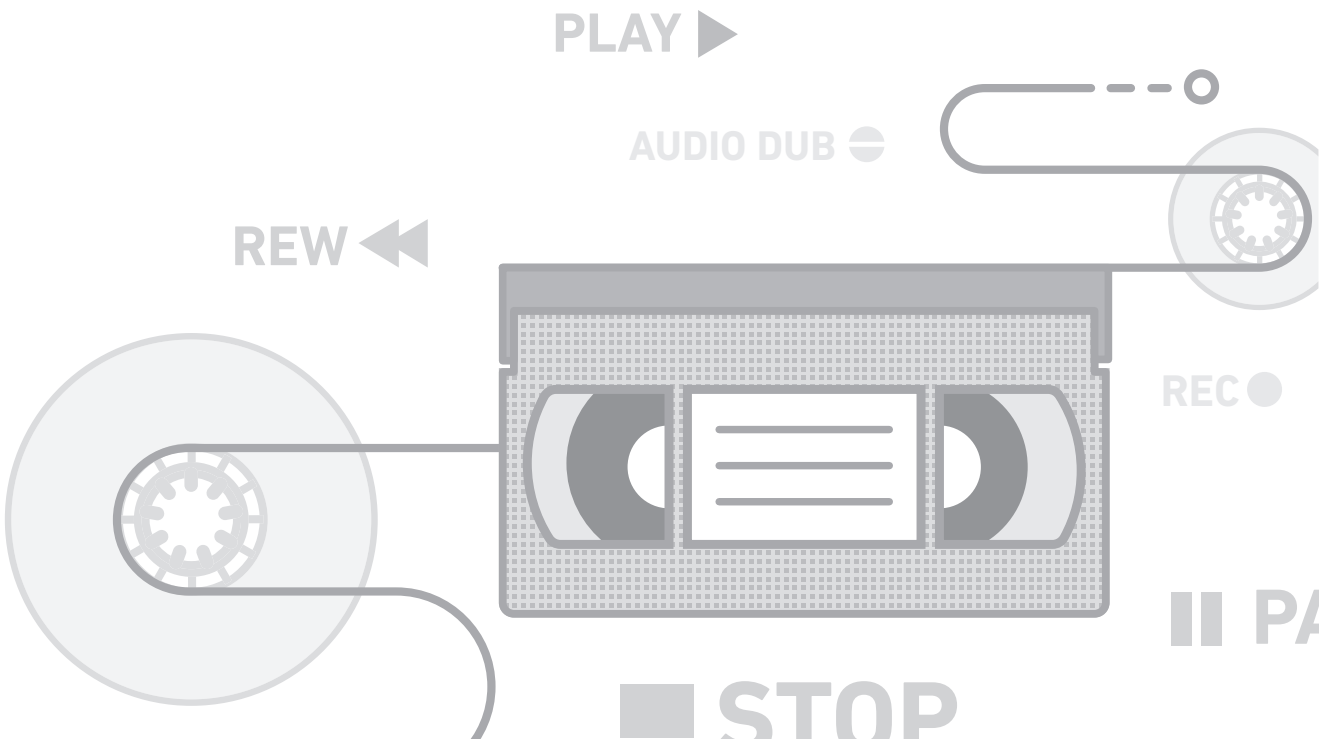

The topic of December's newsletter is VCR, the product that opened the age of video along with TVs. We will look at Samsung Electronics' 'Econo Seven Seven', Korea's first and world's fourth VCR in 1979, and the social changes regarding the VCR.

Korea's First VCR,

'Econo Seven Seven'

1979

Samsung Econo Seven Seven (SV-7700)
Korea's first and the world's fourth mechanical VCR

Samsung Electronics' 'Econo Seven Seven' (SV-7700), which is Korea's first self-developed VCR, was developed in 1979. Korea, after Japan, Netherlands and Germany, was the fourth country in the world to succeed in self-developing the VCR and gained the attention of the world.

Although Samsung Electronics has achieved Korea's first-titled in various electronic products, the accomplishment of the VCR is more meaningful. At that time, the VCR had about 3,000 inner parts, five times more than the TV, and the tape where the videos were stored had to fit exactly into the part (headdrum) which read the tape. Also, VCR not only needed electronic parts but many mechanical parts that required precision as well. So, if this cutting-edge technology was not mastered over time, it would have been impossible to develop the ultimate home appliance, VCR.

Foreign companies that used to lead the technology in the VCR field strictly secured their technology and did not export a single component, so it was a real challenge for Korea to develop the VCR on its own. Samsung Electronics invested about six billion Korean won on research for over three years and as a result, overcame various challenges and was able to

1982 SV-9500
First VCR with wired remote control

1983 SV-24F
First Second-generation VCR
with the front-loading system

1987 SMV-1400
First 'Video Vision'
with combined TV and VCR

compete in a high-tech hub of the VCR market.
'Econo Seven Seven' (SV-7700) is one of the products that became the foundation for Samsung Electronics to grow into a general electronics company in the 1970s. Founded in 1969, Samsung Electronics developed a variety of electronic products and began to establish domestic and international markets in the 1970s. In 1975, Econo TV, the power-saving TV with instant image receiving technology, caused a stir in the domestic TV market, followed by successful development of refrigerators and washing machines in 1974, microwave ovens in 1978, and VCRs in 1979. In the 1980s, Samsung Electronics topped most of its major products in the domestic market and pioneered the overseas markets as well.
'Econo Seven Seven', with the same brand as 'Econo TV' which used to be the number one TV in the domestic TV market at the time of Econo Seven Seven's development, pioneered the domestic VCR market. It was a smart product that had functions such as recording two TV programs at the same time, automatic recording system with an electric timer, and audio dubbing. Why don't we take a look at the main parts of the VCR, which might be a little unfamiliar to young people these days?

Top-Loading system where video tape is placed at the top of the main body.

Included functions such as playback, stop, backwind, fast forward, pause, recording and voice dubbing.

Record a video by turning the dial to set up a TV channel without having to watch it.

1991 SV-9900S

Super-VHS VCR,
with higher level of visual quality

2000 SV-DVD1

'Combo', the world's first VCR and DVD combo player

2003 SV-DVD930HD

The world's first HD DVD combo player to produce SD resolution images as HD resolution images

Videotape format war, ‘VHS vs Betamax’

01 Betamax (Up) and VHS (Below) Videocassette (Source: Wikipedia)

Videotape is a magnetic tape that stored images and sound signals. Although it has been replaced by today's digital storage media and now rarely used, videotape, as the first commercialized video storage media, made a huge impact on the video industry and society overall. Videotapes were able to be spread to each household thanks to the development of the video cassette, a tape wrapped in a plastic case. In the 1980s and 1990s, it became common for families in Korea to watch movies or record TV programs using video cassette recorders (hereinafter referred to as VCR).

When video cassettes and VCRs started to get popular around the world, products with various formats were released. The difference was the recording method. It was about which magnetic tape format it used and how it stored a video. Because each format was incompatible with each other, they competed fiercely to become the standard. At the time when VCRs began to spread across households in the 1970s, Sony's Betamax (Beta+max) and Victor(JVC)'s VHS(Video Home System) confronted the standard competition of video cassettes and VCRs. The standard competition between the two was an important issue in determining the future of the worldwide video industry.

It is possible to guess that the more fuctional technology between the two would win the competition. The product with higher performance would gain more popularity among the public, and the technology will improve as the number of user increases.

The first technology to enter the VCR market was Betamax, and Sony first introduced its technology to other electronics companies in 1975, thinking others would follow the Betamax system as a standard. However, instead of following the Betamax system, Victor developed the VHS system technology and started going its own way.

The technology competition between the two was especially noticeable in recording time and video quality. The initial Betamax's recording time was up to one hour, while VHS was up to two hours. It was a shame that Betamax could not contain a single movie with only one hour recording time, but the high-density recording method made it possible to record more videos than VHS on about 1cm of tape, so the static noise decreased and the screen quality was relatively better. After that, the two systems competitively supplemented their weaknesses and gradually narrowed the technology gap.

As the technology gap narrowed to the extent of being hard to distinguish which is more advanced in video quality and recording time, naturally, the market share became the winning and losing factor, over the technology factor. Price is the basis of the market share. The price of VCRs were quite high to middle-class families at the time when VCRs began to spread across households. The two systems used completely different strategies in pricing policy. Since Betamax was an expensive and high-functioned product, Sony focused on consumers with high purchase power, while VHS had a strategy of expanding the mass market with rental services. From the consumers' standpoint, it would have been more reasonable to rent than to buy expensive products because they did not know which technology would become the standard. Betamax also started rental services later, but VHS already had a dominant market share by the time.

The video rental market, which soon grew, also contributed to the victory of VHS. As video rentals made it easier to watch movies at home, video films became very popular. Filmmakers, obviously produced more films in VHS system, which had a dominant market share, and consumers started to prefer VHS-style VCRs that offered a wide range of movies. VHS system increased in market share and won the standard war in the mid-1980s. Since 1988, Sony had started selling VHS-style VCRs as well. Later in the 1990s, VCRs slowly began to disappear with the development of DVDs that offered better picture quality.

Video Industry in the 1980s, 90s

"Video killed the radio star." It is a famous song by the British duo, Buggles, in 1979. It is a song that expresses the disappointment in the shift of public's interest from radio to TV as the era of video began. At that time, TV was already commercialized in technologically advanced countries, including the United Kingdom, and VCRs began to spread to homes. The TV and VCR made a great influence in society with interesting entertainment content.

When home VCRs were first released, it was an assistive appliance for TVs to record television shows to watch them at any time. A rapid commercialization of the TV broadcasting industry, following the radio broadcasting, led to the appearance of more TV shows at the same air time, making VCR a subsidiary appliance for recording TV shows. After that, VCRs gradually developed to become an independent medium that replaced TV broadcasting and movies, and even became a threat to the TV broadcasting and film industries. It was because the stereotype that 'movies had to be watched only in theaters' was broken as the video film industry was newly established, offering consumers a wide range of choices. Additionally, the increased frequency of watching recorded programs and the development of remote controls for TVs and VCRs led to less advertisement exposure, and eventually stimulated the TV broadcasting industry.

In 1989, 2.68 million VCR units were sold and they took up 26.3% of per-household penetration rate, making video films the arising leisure activity for people in the late 1980s. VCRs rapidly spread in 1992, soaring up to 57% of per-house penetration. The VCR, which was relatively expensive in Korea, was able to be popularized because the price gradually dropped as domestic VCRs were sold in the 1980s and video rental stores appeared. As a result, Korea's video market began to outperform the theater film market. As the market grew, big corporations began to participate as well and it developed into a bigger market.

02 Video rental shop in Trondheim, Norway, 2014. (Source: Wikipedia)

Video rental stores, which began to steadily settle in Korea in the mid-1980s, expanded rapidly in the 1990s to about 35,000 stores across the country and formed a large market with sales of over 600 billion Korean won. The genre of video films that was distributed at that time was very diverse, so everyone could enjoy them. Movies that had been released in theaters were later launched as video films, and various foreign films were imported to Korea in video format. Movies that were produced only in video formats appeared as well.

Meanwhile, there was a serious social problem of harmful images being exposed. Many of the films that were released as video films were classified as so-called 'B class movie', because they were somewhat violent or obscene and could not be shown in theaters. Since it was the time before the regulation law was adopted to control these films, provocative videos were often exposed openly without any restriction. It was similar to an easy access to illegal videos on the Internet these days. In addition, since it was before the emergence of ethical awareness of illegal reproduction, distribution of pirated videos became one of the social problems. In 1986, Korea Public Performance Ethics Committee reported that about 90% of the 4.2 million video films distributed nationwide in 1985 were either harmful or pirated.

The growth of the video industry later expanded to DVD and eventually transformed to today's digital video industry. It seems worthwhile to think how the future changes in the video industry will transform society, and whether the various problems of the video industry we face today have been followed from the past.

HISTORY

From Analogue to Digital

Recently, an interesting news article was published. The topic was 'Top 7 items that every household used to have, but now are hard to find', and one of them was a 'video tape!' These days, you can easily watch the content you want on the Internet, IPTV, or mobile phone, but until 20~30 years ago, people had to go to a theater or a video rental store to watch a movie. Why don't we briefly look at the process of transformation from the videotape to the digital devices of today?

In the 1980s, the appearance of VHS videotapes and video recording technologies revolutionized the way people enjoyed content. People no longer had to go to crowded movie theaters at the exact playing time, but they could instead rent the movies they wanted from video rental stores or buy videotapes to enjoy them at home. However, there were shortcomings. Due to the characteristics of a recording medium, videotapes naturally got heated as time passed or after many times of playback, which led to the deterioration of the video. Moreover, once the subtitles were recorded, they could not be changed. To improve these shortcomings, DVD (Digital Versatile Disc or Digital Video Disc) was released starting from the year 2000. DVD is an optical disk of 12cm diameter that can store images and sound digitally, and can store up to about 17GB (about 24 CDs of 700MB at the time). DVD was very popular because unlike video tapes, it was able to maintain the same image quality after dozens of playbacks. Since then, exponential growth of the capacity of digital content and increasing consumer needs for HD quality images led to the emergence of Blu-ray, the high-capacity optical storage media following DVDs. The Blu-ray uses a much shorter wavelength (405 nanometers) laser than DVD, allowing it to store more data than DVD of the same size. It was able to hold 25GB of capacity on one layer and for the Dual layer (which has two-story data recorder on one side of the disc) Blu-ray, it could store a total of 50GB (about 10 SD resolution DVD movies).

In 2015, Ultra-HD Blu-ray, with a resolution four times higher than Full-HD, was standardized and Korea's UHD terrestrial television broadcasting began in 2017. Along with the trend, Samsung Electronics released Korea's first UHD Blu-ray player in 2016. With the function of automatically setting the TV screen and audio mode, you can experience more convenient and diverse ultra-high definition home cinema.

The ever-increasing development of digital technology has brought many changes to the industry, including the production and distribution of content. The increasing speed of the Internet has made it easier to obtain and enjoy content. In particular, as various entertainment functions of music, video, gaming have been added to smart devices, it has emerged as a new medium for content viewing. We look forward to see how we will enjoy the video content in the next 10 years.

03 'UBD-K8500' Korea's first UHD Blu-ray Player released by Samsung Electronics, 2016

New Historical Collection

Opening the Era of 'Design TV',
「Bordeaux TV」

Last November, a Samsung Electronics' employee sent an artifact donation proposal saying, "I would like to donate my old TV since I recently got a new one." The donations manager was very glad to find which TV product was being donated. It was the 2006 'Bordeaux TV' (LN40R71BD), which is recorded as a million seller in the shortest period in the world's TV history.

Bordeaux TV was released in the days when the design of TVs were uniformly square, so it was a groundbreaking product aiming for "beautiful TV." It attracted the world's attention, not only for its slimness and clear image, but also for its innovative design portraying the shape of a wine glass. The Bordeaux TV was so popular that it became a million seller only after 6 months of its release and 2 months later, it exceeded to 2 million units.

The donor, who bought the Bordeaux TV in 2006 as a wedding gift, said that he had continuously used it for 12 years until he bought a new TV this November. As his two children grew, they enjoyed watching children animations, and he and his wife used to watch movies and soap operas together, so the TV holds many memories of the family. The TV is in very good condition and it still functions well. Although it is a reliable product, there was also a special secret the donor told us about. The donor had thought that if the TV was too bright, it might not be good for the eyes, so he had set the power-saving mode to make the screen a little darker which helped to increase the durability of the LCD! This can be a helpful tip for you as well. We would like to express our gratitude to the donor for the donation of a valuable product.

Bordeaux TV(LN40R71BD)

SAMSUNG INNOVATION MUSEUM / S / I / M

Hours of Operation

Weekdays / 10a.m. ~ 6p.m. (Reservations Only)

Saturday / 9a.m. ~ 5p.m. (Last admission at 4:30p.m.)

Holidays / Sundays, National and other holidays, December 31st

Admission Information

Weekdays / Reservation is required (Docent Tour)

Saturday / No reservation is required (Self-guided tour)

Admission Fee

Free

Visitors

Recommended age of visitor is 13 above
(Middle school or higher education)

※ Elementary school students and younger children must be accompanied by an adult (1 adult for every 2 children)

How to Make a Reservation

Make reservation via website / www.samsunginnovationmuseum.com

Contact Information

Phone / +82-031-200-3113

E-mail / sim.sec@samsung.com

Directions

Address / 129 Samsung-ro, Yeongtong-gu, Suwon-si,
Gyeonggi-do, South Korea

Parking / 031-200-0200

Public Transportation /

Take bus no. 15-1(regular bus) at Exit 4 of Mango Station (Bundang Line)
→ (5 stops) Get down at 'Samsung Digital City P.R. Centre' station
and walk for 2 min towards the S/I/M Parking Tower

Driving /

Enter the expressway from Suwon Singal IC or Heungdeok IC →
Turn left towards 'Samsung Digital City' at the Samsung three-way intersections →
Make a U-turn at the 'Samsung Digital City Main Gate' intersection →
Drive 250 meters and enter S/I/M Parking Tower on the right →
Use S/I/M reserved parking area on the 3rd basement floor(B3)
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