

IJASC 20-4-9

## **A Study on the Necessity for the Music Composition in TV Documentaries – Focusing on In-depth Interviews with Music Directors at KBS.**

Hyung-Jin Kim

*Music Director, Sound Design Team, Korean Broadcasting System, Korea*  
[musickr@kbs.co.kr](mailto:musickr@kbs.co.kr)

### ***Abstract***

*In this study, we investigated the necessity and limitations of music composition required in TV documentary by conducting in-depth interviews with 20 music directors currently working at Korean Broadcasting System (KBS). Our research has shown that composition of music is necessary. However, in reality, it is difficult to use the composed music due to problems such as time and cost of composing and trust in the music composer; so music libraries, film music, or other music are used instead of the composed music in many situations. However, at the time when companies like its rival Netflix are aware of the importance of sound, the impact of Netflix could lead to a decline in the quality of terrestrial TV, which could lead to a weakening of competitiveness. Recently, in the case of sound programs, the sales of secondary works are active due to "internet uploading using YouTube" or "exporting programs", but the sales have been hindered by restrictions on the use of copyrighted works. The music source of library is said to be the one whose copyright problem has been resolved. In this study, we show that the composed music is an ultimate alternative to TV documentaries, since the library music is sometimes suspended due to the situations of management companies.*

**Key Words:** *Mickey Mousing Technique, Nature Documentaries, Music Composition, Music for TV Documentary, Music Selection, Film Music*

### **1. Introduction**

Currently, terrestrial TVs are gradually losing their places by being deprived of the monopolistic status due to the advent of many video media. Due to changes in lifestyle, terrestrial broadcasting is no longer special at present when one-person broadcasting is possible. Its rival Netflix recognizes the importance of sound used in broadcasting, and uses sufficient capital strength to expand its service operations on sound. The company's primary business is a subscription-based streaming service offering online streaming from a library of films and television series, including those produced in-house [1]. In order to cope with the expansion of Netflix's sound service, terrestrial TV is attracting viewers with more high-quality, high-definition, grand and realistic

HD technology images; and emphasizes the importance of sound in Broadcasting System along with the crisis consciousness due to the growth of competitors.

These days, most terrestrial TV companies are trying to generate new income by recycling their programs using curation services, exporting them overseas, or uploading them to the internet. However, no matter how excellent the video content is, if copyright is not secured through the composing of music, the availability of using the second production will be difficult. For example, in the case a program titled <A Walk around the World>, the KBS 1 TV attempted to generate income from the program through YouTube upload, but gave up due to the lack of securing music copyright overseas. When music is needed in a cafe scene in a drama, the current trend is changing to using music that is composed or not using any music at all. In a documentary, music should express subtle emotional changes depending on the length of the scene. In addition, in nature documentaries, it is necessary to use the Mickey Mousing technique (motion music) to express the movements of animals in a fun way, and to use the leitmotiv technique (theme) to increase the concentration of the viewers. A nature documentary or wildlife documentary is a genre of documentary film or series about animals, plants, or other non-human living creatures, usually concentrating on video taken in their natural habitat but also often including footage of trained and captive animals [2]. In animation and film, "Mickey Mousing" (synchronized, mirrored, or parallel scoring) is a film technique that syncs the accompanying music with the actions on screen [3]. The term meaning "Matching movement to music," or, "The exact segmentation of the music analogue to the picture" comes from the early and mid-production Walt Disney films, where the music almost completely works to mimic the animated motions of the characters [3-5].

A leitmotif or leitmotiv is a "short, constantly recurring musical phrase" associated with a particular person, place, or idea [3]. Such a high-quality nature documentary is almost impossible without composition of music. Therefore, if the music composition is not properly used, there is a possibility that the quality of the documentary may deteriorate.

Nevertheless, documentary producers are using library music as background music in the production of many works without any restrictions, because they think it is convenient to save time and money. Even if the composed music is to be used, producers are even discouraging the willingness of composer to write music because the producers provide too short time and too little cost to the composer. In this study, we confirmed the legitimacy of music composition based on psychological grounds, and conducted in-depth interviews with KBS music directors who are currently actively working, in order to investigate the necessity and limitations of composition they feel in the field.

Kim Tae-Eun [6] discussed many differences in narrative delivery between common movies and Virtual Reality (VR). The audiences will appreciate the narrative of a VR film in the same way as common movies, but they exists in the same space in VR films and thus need a different way of narrative structure from the scenes of common movies [6].

## 2. Method of Research

In order to find out the importance of music composition in nature documentary, we have conducted in-depth interviews with 20 music directors who have experience in producing documentary music for 8 to 51 years at KBS and are currently actively working.

The contents of the questions used in the interview are as follows.

- Personal information such as name, age, and broadcasting experience

- Do you think the composed music is necessary for your documentary?
- If necessary, why is it necessary; and if not, why not?
- What genre of documentary do you think is essential to composing?
- What is the appropriate fee for a composition based on nature documentary of 60 minutes ?
- Other free opinions, etc.

The in-depth interview, consisting of a total of six questions, was conducted for two months from October to November 2020, and the time required for an interview was about 1 to 3 hours per person; the interviews were conducted in person, or over the phone if the face-to-face interview was not easy to deal with.

**Table 1. Interviews with 20 Music Directors**

No.	Music Directors	Years of Broadcasting Experience	Age
1	C	20 years	54
2	K1	28 years	55
3	L	28 years	56
4	K2	21 years	46
5	L2	19 years	44
6	L3	17 years	41
7	K3	22 years	45
8	H	13 years	38
9	H2	42 years	64
10	G	23 years	51
11	B	29 years	52
12	K4	8 years	39
13	O	27 years	49
14	N	25 years	52
15	H3	27 years	53
16	S	26 years	51
17	E	20 years	47
18	L4	20 years	46
19	L5	51 years	72
20	J	20 years	49

### 3. Results of Research

#### 3.1 Psychological basis

##### 3.1.1 Classical Conditioning

Drama music director C says that he feels a lot of difference when a music he always heard in the drama is

coming out of other programs, such as entertainment or documentary. Usually, if you consider one drama as a standard, weekend or morning dramas are aired from 50 to 100 episodes.

In the case of music that is broadcast several times, the music director always remembers the music of the drama he directs because the same music is played several times.

This phenomenon is called 'Classical Conditioning' in physiology. "Classical Conditioning" is a behavioral psychology theory well known as "Ivan Pavlov's Dog experiment". The theory says that a response that was insensitive to a particular response is triggered by repeated stimuli that unconditionally elicit a response [7, 8]. As in the case of music director C, it could be natural for him to feel a sense of difference if the music, used more than 200 times in his own drama, is used again in other broadcasting in a completely different situation. Since most dramas are released in the form of OST albums, if the music directors have copyrights of the drama they will be able to use music freely on the air when necessary in broadcasting. It may be irrelevant when the music is used in similar videos, but if it is used in programs such as drama, documentary, culture, and entertainment, then at least the music director or operator who had composed the music may feel uncomfortable.

### **3.1.2 Cognitive dissonance**

Many music directors often answered that the reason why composition is essential is because music that matches the screen is needed. Even if they search for a large number of songs, it is almost impossible for them to find music suitable for the video. Therefore, they may compromise with appropriate music to some extent or compose music on demand regardless of the composition fee. Music director S, who makes travel documentary music, uses the music he played or the music of his choice when he needs to match the song of a traveler. When he doesn't like the music at the end, he writes his own music. Music director L2 sometimes compose songs even when he is not paid for the composition, because he can save more time in composing and he can have music with better quality than spending a hard time choosing songs.

No matter how well he classifies the music, it is not easy for him to find songs from a vast array of music, and he cannot easily choose the music he wants. Most skilled music directors think the music suitable for the video, the beat of the music, the composition of the melody, the composition of the instruments to be used, etc. When they find it difficult to find music suitable for use in documentaries, they write songs as needed. The reason is that it is also not easy for the music director or music composer to find music that exactly match the documentary scene according to their intentions.

In this way, the phenomenon that the director or composer does not tolerate the music that does not fit the images they want and writes it in person is called 'cognitive dissonance' in psychological terms. Cognitive dissonance, as a psychological term, refers to a state in which we are incompatible with ourselves because of uncomfortable experiences and mental stress when we experience discrepancy by recognizing two or more thoughts and beliefs that are opposite to ourselves. In the field of psychology, cognitive dissonance occurs when a person holds contradictory beliefs, ideas, or values, and is typically experienced as psychological stress when they participate in an action that goes against one or more of them. According to this theory, when two actions or ideas are not psychologically consistent with each other, people do all in their power to change them until they become consistent [9, 10]. An instinct to eliminate cognitive dissonance appears when an abhorrent situation occurs that must be addressed or avoided. Likewise, in the situation where the composer deserves to receive the composition fee, there are cases where he writes it by his convenience even though he knows that it is a loss if he cannot receive the self-writing fee.

### 3.2 A Survey on the Perceptions of Music Directors on Music Composition in Documentary

#### 3.2.1 Necessity of Music composition

From this survey we can see that most of the music directors agree to some degree about the necessity of Music Composition in producing documentaries. Table 2 shows the summary of our interview contents.

**Table 2. Necessity of music directors for composition**

Reasons for the necessity of music composition	Reasons for the difficulty of music composition
<ul style="list-style-type: none"> <li>▪Mickey Mousing</li> <li>▪Leitmotiv</li> <li>▪Originality</li> <li>▪PD's request</li> <li>▪Copyright</li> <li>▪Convenience</li> </ul>	<ul style="list-style-type: none"> <li>▪Production cost</li> <li>▪Production time</li> <li>▪Work quality of the composer</li> <li>▪Convenience of library</li> </ul>

Among all the documentaries, most music directors chose "nature documentaries" especially, as a genre that requires composition. The most common reason for this was that the use of Mickey Mouse techniques to describe the behavior of animals is an area that cannot be done other than composing, so they said the music composition is essential. They replied that 'leitmotiv technique' is also an important element of composition. The reason is that "variations of the 'leitmotiv technique' is also needed to show the consistent musical color of the documentary, or the documentary should maintain one topic, or this was because musical instruments had to be replaced according to the characteristics of the sound. Only four of the music directors knew the terms of leitmotiv or Mickey Mousing techniques. The rest of the directors understood the meaning of the term immediately after being explained. Therefore, we could see that these methods are actually used by music directors in their working spot a lot, but the terms are not used in practice.

Another reason for the need for composition was 'originality'. If existing movie music or library music are used to insert into documentary video, there is no originality that only the scene has. They answered that there is no reason to include National Geographic music in Korean documentaries with Korean emotion. As mentioned earlier, they replied that it was not appropriate for film music or drama music written for a specific documentary to be used in scenes that do not meet the intended purpose. No matter how good a library music was, there was an opinion that the library music was not suitable for expressing emotions because it is commercial music manufactured at the factory. They responded that composition was necessary because the music to be appreciated and the music suitable for the video were different. In addition, in the case of library music, no matter how large the volume is, the music preferred by music directors is similar, so there are cases where it is selected overlapping. Since the same music may be played from different broadcasting stations during the same time period, the same music may be continuously played from different programs of the same broadcasting station, or the same music is sometimes released in succession in the case of live broadcasts on the same broadcast when the music composer is different, they said that it is better to compose if possible.

In the case of music director L5, he said that he actually received complaint because the music he used as general BGM for <In-Depth 60 Minutes> was used as a signal music in other broadcasting station. The music director also said that when he discusses music with a PD, he is required to use specific musical instruments and music. Because of the originality of background music, PD sometimes requires music

director to compose music from the beginning. Another reason for composing is that it is often not easy to select “music that fits the length and feeling of the scene” properly. For example, if the feeling of viewer changes depending on the scenes, in other words, if the music shifts from bright feeling in the major to sad feeling in the minor, or if the music director or production producer wants a specific atmosphere of background music, then there is no alternatives but to compose music.

*Music Director C says.*

*“You know well. Please play with the feeling of Band of Brass here.*

*Please keep playing the violin music from where this grandmother goes.*

*Oh, not this music.*

*I hate the sound of the cello, so can you just delete the cello music?’*

*There are times when PD says this way. In that case, there is really no answer.”*

Another common reason is copyright. Nowadays, broadcasts are often uploaded to the internet, exported to foreign countries, or submit for exhibitions, but they are subject to copyright restrictions. As mentioned earlier, <A Walk around the World> , cannot be uploaded to overseas internet because copyrights of overseas music have not been resolved. In the case of a drama, music director L3 was sued by a performer for a classical music he had used in "Winter Sonata" and paid hundreds of millions of won in compensation. Music director L3 personally paid money for a copyright infringement for using a traditional Korean music from the arrangement version of Chopin's "Butterfly" on a program called <6 O'clock at My Hometown>. Most recently, music director L3 was sued for a copyright infringement for using the arrangement of Hyun-mi's <Face I wants to see> in the drama.

In addition, there have been large and small copyright disputes in broadcasting; and library companies and broadcasting companies have filed copyright infringement lawsuits, intensifying legal disputes.

Like this, the copyright issue is already approaching us as a very serious problem. So, in the case of recent dramas, it is unconditionally forbidden, except for the composed music, to use even the music that flows from a café. In the case of library music, music is restricted to use only in Korea, so we must obtain permission in order to export a broadcast overseas or upload them to the internet. Since contracts for music sources are frequently terminated due to the circumstances of each library company, we cannot use those sound sources safely. The only place in Korea that has a music directors as employees is the sound team in KBS, there was also a case where a library company suddenly and unilaterally terminated the contract, causing a commotion in replacing music and signals that had been used regularly.

In particular, in the case of the title's signal music, although the music has a jingle effect that represents the identity of the program and enables viewers or consumers to remember the brand or to associate it with an emotional brand, there have been cases where the music suddenly need to be replaced [11, 12].

Figure 1 is a picture of a partial excerpt of an official letter that the library company has requested to delete the sound source while terminating the contract for the sound source.

### **List of Request to stop the use of sound source**

1. Please check the sound sources that have been discontinued and delete the corresponding files.  
Please check it all the time before the final work so that there is no mistake in the work.
2. Albums with only album names cannot be used, and the album with the song name written in the album name cannot be used only for the corresponding song name, but other tracks

- in the album can be used.
3. The parts marked in red in the entire list are sound sources that have been suspended since the last time and have been added to the list, so if you checked last time, you now only need to check the red letters.
  4. Since this list is created based on the list provided with sound sources, if you receive the music from another company or another channel, please check if it corresponds to the sound source that has been suspended.

No.	Labels	CD codes	Album names	Music names	Remarks
1	Headlock	HDL	All albums		Termination of contracts
2	ICON TRAILER	ICON	All albums		
3	PostHaste Music	PHM	All albums		
4	Hum Tracks	HUNT	All albums		
5	Pop Machine	POPM	All albums		
6	Egg Music	EGG	All albums		
7	Justement	JUST	All albums		
8	APMC	APMC	All albums		
9	Sirec Cues	SIR	All albums		
10	Sonic Elixir	SLX	All albums		
11	Liquid Cinema	LQC	All albums		
12	Inside Tracks	LQC_INSD (INSD)	All albums		
13	Cyber TM	CYPT	All albums		
14	Chicago Music Library	CML	All albums		
15	Score Addition	SDN	All albums		
16	Sound Designs	SD	All albums		
17	5 Senses Music	SSM	Possible only in Korea		

**Figure 1. List of request to stop the use of sound source.**

If the music is used by infringing copyright, the producer will have to take some responsibility and the music director will suffer direct damage, so the problem of copyright infringement has to be considered seriously. Whether we want to or not, copyright dispute is already a serious problem that occurs frequently around us and should never be overlooked.

### 3.2.2 Reason Why Music Composition is Difficult in Documentary

Music composing is necessary, but the reason why we don't use it well is because of the production cost.

Music director B says:

*"No matter how much you need music composition, it is not easy to write music in reality,*

*since the production cost remains the same as it used to be.”*

According to the survey, music directors think that the appropriate composition fee per hour is 500,000 won to 30 million won, but the fee is too far from the one set by the company; so, if possible, they select music instead composing music. From the composer's point of view, the composition fee is so cheap for him that he loses his motivation to write music. In KBS, the production team sets an extremely low cost for composition, and the audit office sometimes demands that the money be further reduced. In reality, KBS cannot raise the license fee, so it is suffering a deficit every year because advertising revenue has significantly decreased due to the emergence of cable broadcasters as competitors, and the emergence of social networks such as YouTube, Netflix, and Facebook. Therefore, KBS is hardly able to produce programs that cost money and is trying to produce programs that have received external sponsorship. KBS is trying to save the budget as much as possible by organizing programs during the extreme summer heat or producing curation programs. The term “organizing programs during the extreme summer heat” refers to the replacement of regular broadcasting with a rebroadcast, special feature, curation program, purchase documentary, etc. in order to reduce production costs during the scorching summer season [13]. Table 3 shows the standard table of KBS composition fees as of 2020.

**Table 3. Standard table of KBS composition fees as of 2020.**

(Unit: Won)

Classification		Payment criteria					
Music fee (3000)	Composition, Arrangement						
		<b>Size</b>	<b>Applied Standard</b>	<b>Class S</b>	<b>Class A</b>	<b>Class B</b>	
		More than 25 Musical instruments	3241	Per music	240,000	192,000	153,600
		More than 20 Musical instruments	3242	Per music	200,000	160,000	128,000
		More than 15 Musical instruments	3243	Per music	160,000	128,000	102,400
		More than 6 Musical instruments	3244	Per music	120,000	96,000	76,800
		Less than 6 Musical instruments	3245	Per music	90,000	72,000	57,600
		Simple melody, Music for play	3246	Per music	60,000	48,000	38,400
Title	3247	Per music	300,000	240,000	192,000		

		Logo subtitle	3248	Per music	150,000	120,000	96,000
		More than 25 Musical instruments	3331	Per music	195,000	156,000	124,800
		More than 20 Musical instruments	3332	Per music	160,000	128,000	102,400
		More than 15 Musical instruments	333	Per music	120,000	96,000	76,800
		More than 6 Musical instruments	3334	Per music	80,000	64,000	51,200
		Less than 6 Musical instruments	3335	Per music	50,000	40,000	32,000
		1. The number of musical instruments is determined based on the case of playing different sounds. If you play the same melody, it is calculated as one instrument. <New on September 6, 2006.> 2. If the length of the song is more than 80 bars, an additional payment may be made within the bounds of 50% of the usage fee. <New on September 6, 2006.>					

(Reference Source: Provided by KBS)

KBS divides the levels of composers into three classes; S-class (or super-class), A-class, and B-class, and gives special treatment to so-called S-class composers. KBS has an inspection system in order to check whether the composer wrote the only music by himself, and the inspection procedure is also very difficult. The 'production time' is also pointed out as the next issue. In the case of live broadcasting <6 O'clock at My Hometown>, the video will be broadcast in the morning or afternoon of production day. As the video production of Current Affair documentary, <A window on current affairs planning>, is completed just one day before the broadcast, there is not enough time to prepare for broadcasting at the station. In the case of a program such as a special edition or a big plan, a temporary video is made as early as 2-3 weeks with a little more care, but a program is usually made a week or 2-3 days before broadcasting.

Table 4 shows the comparison of the production cost and production period of the BBC documentary in UK and KBS documentary in Korea.

**Table 4. Cost and period of documentary productions by UK and KBS.**

	KBS, Ceramic ware (in 2005)	BBC, The Living earth (2006)
Production Cost	200 million won.	2.7 billion won
production period	3 years	5 years

When KBS produced 'Ceramic ware' in 2005, the music director was 'Seunghyun Park' and the music composer was 'Bangeun Yang'. The broadcasting documentary in 6 episodes was considered a landmark project at the time, since it was made by investing 1.2 billion won over three years. There is a big difference between the production cost and the production period of <Ceramic ware>, which KBS made in 2005, and <The Living Earth of BBC>, which the BBC made in 2006. Also, music directors mentioned documentary music most often, and the reason why it is difficult to compose was because of the infrastructure of composers. Except for so-called top-class composers, most of the composers actively working in broadcasting stations are asked to write music by the connection of the music director or the music director, and most of them have no broadcasting experience. So, it is true that in the process of recruiting music composer, music directors have difficulty explaining to the composer about the broadcast, no matter how excellent the composer is.

Music director K4 says:

*“The composition is absolutely necessary, but there is no one to request the composition. If I ask for it wrong, there are cases where the composer is going to dine and dash.”*

No matter how good a music composer is, if a music director creates a program with the composer, the music director will be responsible for the entire music, therefore, when a music director recruits a composer, he wants a composer with a lot of experience in broadcasting music and a specialty in it.

Although there are academies run by some broadcasting companies to train music composers, it is difficult at universities to find composers who have practical experience in broadcasting and have specialized training in broadcasting music composition, so it seems urgent to train professionals at universities. Although students of music composition graduate from many music colleges, it is difficult for them to advance into broadcasting professionals, because only few of them have specialized in broadcasting.

#### **4. Conclusion**

In this paper, we presented our study on the necessity for music composition in TV documentaries, by conducting in-depth interviews with 20 music directors currently working at KBS in order to investigate the necessity and problems in writing music in the situation where the library music, OST, and composed music should be used. As a result, most music directors agreed that composition for use in documentary music is an essential element. However, it was found that there are many cases where composition is not possible due to production cost, production time, and composer's infrastructure problems.

Music composition was necessary in techniques such as the leitmotiv technique (theme) and the Mickey Mousing technique (motion music), and the composition was required by PD's request, the convenience and originality of the music director, use of music suitable for the flow of video, or the use of copyright.

If you want to use library music, you have to solve the copyright problem because the sound source is changing frequently due to the circumstances of the company. If you want to use OST sound source, you may have an inadequate aspect in terms of 'Classical Conditioning'. Most of library music and OST music, that are conveniently used for "selection of music" in documentary productions, are limited to use only in Korea, so there is a problem that you must obtain permission when you want to export overseas or upload to the internet. In addition, these selected music showed problems such as the possibility of termination of the contract at any time due to the circumstances of the company, instability due to frequent replacement of the sound source, and inappropriateness of "cognitive dissonance" rather than video composition.

There are almost no infrastructures for training professional broadcast composers. Therefore, it will be necessary to open a specialized department or major at universities or other professional training institutions, and it is expected to urgently implement the actualization of production costs so that the infrastructure can increase. A film company or drama company runs a recording studio composed of professional song writing teams to produce music. Likewise, it is necessary to create an environment in which broadcasting stations can provide sound sources for the production of Korean and high-quality documentaries. Depending on the times and the environment, the importance of the music for the documentaries of terrestrial broadcasting stations is growing. However, producers only value budget and audience ratings, and sometimes ignore the completeness of music even though they have produced documentaries with quality content. Broadcasting companies tend to pay attention to writing music by allocating budgets in order to produce large-scale natural documentaries. However, when producing curation programs, recycled natural documentaries, and one-time documentaries, most of the composition fees are not paid, so even if you want to select a music from library, the budget is often very short. When it comes to broadcasting, are there really important or unimportant broadcasts, whether it is a large documentary or not? In order to play a role in maximizing the delivery of the story intended by the producer and in dramatically delivering the visual beauty through matching with the video by inserting music that can well express the producer's point of view and emotion in the right place and right time, the producer should establish the identity of the work and should produce a fun and highly complete documentary; by actively playing a role in expressing characters and stories through 'leitmotiv' written like movie music, and in increasing the immersion of the work through "Mickey Mousing technique". When you draw, it would be too bad if you finished sketching perfectly, but then ruined the coloring afterwards. In this study, we conducted a limited survey focusing on music directors only in the broadcasting company KBS, so we did not investigate the thoughts and situations of other music directors in other broadcasting stations. And, given that the crisis facing the broadcaster is a financial one, it is unclear what will happen to the music composer in the future. Therefore, as a follow-up study, in order to improve documentary quality in the financial crisis it is expected that research will be conducted in the future on the thoughts of music directors in other broadcasting stations, discussions on the costs of composing and productions, etc.

When broadcasting stations produce TV documentaries, music composition is essential for copyright use or improvement of quality of works, and fair treatment should be accompanied by it. For this, more discussions and research should be conducted in the future.

## References

- [1] D. Pogue, "A Stream of Movies, Sort of Free," *The New York Times*. ISSN 0362-4331. Archived from the original on March 22, 2016.
- [2] R. Malnick and E. Malnick, "BBC accused of routine 'fakery' in wildlife documentaries," *Daily Telegraph*. ISSN

0307-1235, 2011.

- [3] [https://en.wikipedia.org/wiki/Mickey\\_Mousing#cite\\_note-2](https://en.wikipedia.org/wiki/Mickey_Mousing#cite_note-2)
- [4] A. Rauscher, "Scoring Play: Soundtracks and Video Game Genres", Music and Game: Perspectives on a Popular Alliance, p.98, 2012.
- [5] P. Wegele, "Max Steiner: Composing, Casablanca, and the Golden Age of Film Music," Rowman & Littlefield, 2014.
- [6] Kim Tae-Eun, "Interactive VR film Storytelling in isolated space," *International Journal of Advanced Smart Convergence(IJASC)*," Vol. 9, No. 1, pp.163-171, March, 2020.
- [7] R. E. Clark and L. R. Squire, "Classical Conditioning and Brain Systems: The Role of Awareness Robert," pp. 77- 81, 1998. DOI: 10.1126/science.280. 5360. 77
- [8] J. R. Manns, R. E. Clark, and L. R. Squire , "Awareness predicts the magnitude of single-cue trace eyeblink conditioning," *Hippocampus*, 10(2):181-6, 2000.  
doi: 10.1002/(SICI)1098-1063(2000)10: 2<181::AID-HIPO7>3.0.CO;2-V. PMID: 10791840
- [9] L.Festinger, "Cognitive dissonance". *Scientific American*, 207 (4): SciAm.207d. 93F., p. 93–107,1962.  
DOI:10.1038/scientificamerican1062-93. PMID 13892642.(1962).
- [10] [https://en.wikipedia.org/wiki/Cognitive\\_dissonance#cite\\_note-:0a-1](https://en.wikipedia.org/wiki/Cognitive_dissonance#cite_note-:0a-1)
- [11] <https://www.soundsnap.com/tags/jingle>.
- [12] <https://blog.leightonbroadcasting.com/blog/the-importance-of-jingles-for-advertising-your-business>.
- [13] <http://media.nodong.org/bbs>.