#### The Research of Taiwan Virtual Idol Design Factor Analysis

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#### Abstract

In December 2014, Kaohsiung MRT works with creator to launch "K.R.T. GIRLS" in order to attract young people's attention, it received a great response. In addition, Taiwan professional baseball team Uni Lions also established girl idol group "Unigirls Junior" at June 2016, the group also has three virtual idol to serve as its corporate image spokesperson. In October 2016, Taiwan Tainan City has also launched "Fucheng Xiaoman" to promote Tainan City's tourism and culture. More and more government units and enterprises want to attract young people through virtual idols. These virtual idols have a charming, lovely, friendly, even "Moe" appearance. Because virtual idol industry is becoming more and more popular, if the design principle behind the design of the virtual idol could be study, it is possible for future creator to create additional economic value. Therefore, this research will start from understanding the design principle of virtual idol in Taiwan. The research will analyze the literature of the character design to understand the design elements behind the character. And using Expert Assessment to verify the elements. Finally, using Case Analysis to examine the elements of Taiwan virtual idol for corresponding results of this research. The research result of this research is to unify the design concept of Taiwan virtual idol, in order to assist the new designers to enhance their design creativity. This research expect to serves as a sample for future researcher or designer to reference on.

Keywords: Virtual Idol, Character Design, Design Factor Analysis,

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#### Introduction

According to statistics data of 2016 from Taiwan highest level of the executive branch, the personal measures of national income and output in Taiwan, raised from 12,399 U.S. dollars to 19,653 U.S. dollars, during 1996 to 2016. The situation also improved people's consuming ability, and raised the development of anime industry in Taiwan. For example, one of the famous comic-con activity in Taiwan "Fancy Frontier", short of "FF". The FF1 begin at October 5 and 6, 2002, at Taipei World Trade Center hall 2 (now is Taipei Nan Shan Plaza), there are 550 peddlers were participated in this event. Furthermore, the FF29 begin at NTU Sports Center in February 11 and 12, the number of peddlers grew into 2000, they come from different countries, such as Japan, Hong-Kong and Singapore("Fancy Frontier Activity review ," 2017). This shows that animate industry have a great opportunities and consumers in Taiwan.

Because the development of animate industry, many Taiwan government units and private enterprises started to create virtual idol in the way of operating spokes-characters, hoping to attract the attention of animate consumer. For example, "K.R.T. Girls" is the virtual idol released by Kaohsiung MRT and SimonCreative team. on November 2014 (Feng & Yeh, 2014). At first, the K.R.T. Girls was only a temporary character for the comic-con activity at Kaohsiung, The Pier-2 Art Center. However, because the spread of news, media and the internet, the K.R.T. Girls began to be much more popular. So Kaohsiung MRT officially signed with the SimonCreative team, let the K.R.T. Girls become the spokes-characters of Kaohsiung MRT. At the same time, SimonCreative team set up the K.R.T. Girls Facebook fan page, according to statistics data of the fan page, the number of fans reached nearly 90,000 at December 2016. The K.R.T. Girls not only bring popularity, but also bring unique culture for Kaohsiung MRT.

Because the appearance of these special spokes-characters, they became a special culture for local, which also promotes the local economic and industrial development, and achieve the purpose of creating a business or local characteristics of culture.

#### **Research Motives**

Due to the improvement and progress of the technology, AR and VR become a tendency of the future, which makes virtual idol more indispensable and necessary. For example, Japanese Domino's Pizza worked with popular virtual idol – Hatsune Miku in 2013, using AR combined with APPs, in this way, the company makes 10 more times money than anticipated (Okama, 2013), which reveals that the impact of virtual idol in this generation.

Therefore, this research will use the virtual idol cases in Taiwan as a sample, through analysis character's shape, color and characteristic, in order to understand the design method behind the character. In addition this research want to make basis and data for the freshman of designers and researchers, this is a good way to make them improved and created virtual idol with more characteristic, stylish. And the most important, make virtual idol more popular to people.

## **Research Purpose**

Based on the research background and motivation, the main purpose of this research will focus on character modeling, and then deduces the design factor of the virtual idol. To understand what the design factor behind Taiwan virtual idol. The purpose of this research is analyzing the design factor of the Taiwan virtual idol.

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## Limitations of the Study

The major analysis of this research are based on Taiwanese case, and the "human type" virtual idol is the main research object, so the scope of the research relatively is narrow, and it is difficult to include the numerous examples of spokes-characters. Beside the main design style of Taiwanese virtual idol is Japanese anime style. Due to the reason, the research will also follow Japanese anime style. In the future, researcher can basing on other type of spokes-characters as the main research object, and then understand the design factor and detail behind the other types of spokes-characters.

Therefore, the "spokes-characters" and "virtual idol" in this research are the human type of spokes-characters and virtual idol as the main description object. Other types of spokes-character and virtual idol are not discussed in this research.

# Literature Review

# **Spokes-Characters and Virtual Idol**

Spokes-characters, which made their debut in the late 1800s in the form of registered trademarks, have long been important forces in advertising strategy and American culture (Callcott & Lee, 1995). Until recently, spokes-characters has become an indispensable image representation, but also because the features of spokes-characters, companies and government unit starting to use spokes-characters as their spiritual or product image of the representatives.

There are many different interpretations of spokes-characters definitions. Callcott & Lee (1995) said that "Spokes-characters presented via hand-drawn illustration were thus joined by live humans and animals photographed in costume or in character." Wang (2004) said that "Spokes-characters are based on a comprehensive analysis of competitive environment, competitors and consumers psychology. Based on their own brand or product characteristics to design a viable cartoon character, animal or lifeless objects." In 2006, Holzwarth, Janiszewski and Neumann using the word "Avatar" to represent spokes-characters, and they said "An avatar is a graphic representation that can be animated by means of computer technology." The word "avatar" has its derivation in the ancient Indian language Sanskrit and refers to original definition, present- day definitions of an avatar refer to a representation of an entity. Hung (2016) define the spokes-characters as using drawing and technology to present human, animal, or graphical forms as a virtual character to promoting products or brands.

In the part of virtual idol, Zhang (2003) said that "Using computer technology to simulate characters. As long as people have emotional recognition with the character, it can be called that the character is a virtual idol." As the definition of virtual idol, and made a comparison with the definition of spokes-characters, it can be found that

they have very much similarities. For example, in the Kaohsiung Rapid Transit Corporation 2015 Annual Report, p57, it is mentioned that "KRTC launched "K.R.T. GIRLS" project in late 2014. The virtual idol station staff "Xiao Qiong" …" Although the English translation is using "virtual idol" as a synonym, but the original Chinese used "spokes-characters" as a synonym. In south of Taiwan also has one virtual idol called "Fucheng Xiaoman", the Facebook fan page also mentioned that "Xiaoman is the spokes-characters that design for promotion tourism and cultural of Tainan City." Therefore, most of the virtual idols in Taiwan are combined with the advantages of spokes-characters and virtual idol, so that the character can bring more benefits and create more value.

# Character Design

Different character design modeling will give people a different psychological experience, not only the designer subconscious will affect the character design, the character will also affect the viewer's emotions (Xu, 2005). So a successful virtual character was based on public recognition and moving (Zhang, 2005), and then make people impressed, become a common topic between people. Yet, the victual character are just like human kind, can be divided into two categories, "Internal" and " external" ."Internal" included the background story and personality, "external" included the character appearance, shape, costume and color.

About Internal, the relationship between the character and story is inseparable. In the story, character is the individual of having a specific behavior or personality, the character is also the leader of the story. The character can convey the subject of the story, and then triggering the resonance of the character and the story (Cai, 2006). A good story can inspire the charm of the character, and then attract the attention of the viewer. At the same time, special character personality will create their story, and then produce more different development of story. So a good character must have an attractive Internal, to make people deeply fascinated.

About external, with the appropriate clothing and modeling is very important. Zhang (2013) pointed out that "When designing a character, the character need to base on age, environmental background, with the appropriate costume and details, so that viewer will naturally feel the characters credible." At the same time, the character personality will not only affect the design of the character, but also in the character costume (Lin, 2016). In addition, color will also affect the character appearance, Chen and Wuang (2014) said "Color matching is to show the image of the character, so that the viewer can have intuitive, simple cognitive, but this color psychology is not absolute, the influence condition will according to the environment, mood, color experience when the viewer saw it." Human beings are visual animals, if the appearance of the character can be very attractive, it will naturally to make viewer have a deep impression with the character.

#### Summary

Based on the literature of the virtual idol, spokes-characters and character design, this research integrates the factors to design a virtual idol, for detail information please refer to Table 1:

	Design Factor	Meaning		
Internal	Story	The story part can be close to the background of partner, let character have more content, so that viewer will know more about the details. At the same time, the story will also needs character to perform, so viewer will more understanding the story behind partner.		
	Personality	Personality will let character show their own story, so viewer will noticed about the character's detail. However, the character will have to speak for the partner, so the personality of character won't violate the social justice.		
External	Appearance	Because the main work of virtual idol is speak for partner, so the character needs to have a popular look, and unite the Internal factor, which makes character have more features, using this way to attract viewers' attention.		
	Costume	The costume design should be close to partner's visual image, and add more details from the Internal factor. In order to highlight the character's features, in order to make viewers have stronger impression between the character and the partner.		
	Color	In color, it can use the visual color of the partner, to make the viewer have intuitive association. At the same time, the character personality will affected color, so choosing the right color can make character more special.		

Table 1: Virtual idol design factor

The Internal factors will affect character external factors, while the external factors will also affect the personality and story of the character. Therefore a good character design will have a lot of important design factors without losing consistency, so that the character will be more meaningful, and leave more impression to the viewer.

# **Research Method**

The main purpose of this research is to analyze the virtual idol case in Taiwan, and derivate the design factor behind the virtual idol, in order to facilitate the development of related research. Although to the cases of Taiwan's virtual idol increased dramatically in recent years, there is not much literature of related topic, and there are also fewer case analysis in the industry. Therefore, this research is an exploratory study. And the research process of this research will be divided into three steps, as shown in Figure 1:



Figure 1: Research process

In the first step, this research will use Secondary Data Analysis to summarize the design factors required for character design, and make the first revision by Expert Interview. The Expert Interview is a semi-structured interview, in the part of sampling component, the expert interviewee does not represent the identity of a single case, it represent a group of experts with special professional (Uwe Flick, 2008). This research selected Expert Interviewed are Taiwan's current character design factors of virtual idols. The experts interviewed are Taiwan's current character designer, and the character design work experience has more than five years, in the qualification, experience and professional background have a considerable degree. And the number of interviews in this research is based on the data saturation. When visiting the third expert, the answer begins to repeat, so this research will analyze the interview content of three experts, and then modify the first step of the design factors.

After the design factors have been corrected, this research will development a character design factor model, and then using Case Analysis to contrast the virtual idol cases in Taiwan, to deduce the feasibility of the model. And the Case Analysis is to explore a case in a specific context of the activities, and then to understand the uniqueness and complexity. Case Analysis can help researchers understand specific real situations, and then have a better understanding of the research (Jiang, Wu, Weng, Liu, 2000).

## **Research Result**

#### **Expert Interview**

After the Expert Interview, this research found out that there are still many shortcomings in Table 1, but get a lot of valuable advice from experts, for example:

- Culture not only affects the design of the character, but also affects viewer. So the relationship between character and culture needs to be discussed.
- When designing a virtual idol, the balance between complexity and simplification is very important.
- Virtual idols can have their own colors, it can make viewers more impressive about character.
- Virtual idols need to be second created by fans, it could create more value for other industry.
- When designing a virtual idol, it is important to avoid setting the character too much, it will limit the development of the character.
- The design of virtual idol should focus on their external design, and then the Internal's factor.

Because "Culture" becomes an independent factor, this research will refer to "threelevel of culture" (Yang, 2007) to amend the content of table 1, Please refer to Table 2 for the contents of "three-level of culture":

	Meaning		
Material Culture	Refers to the tools, daily necessities of life, as well as modern high-tech created machines. Human beings use the material culture to conquer nature and transform nature, and then obtain the necessary items for survival.		
Institutional Culture	Refers to moral ethics, social norms, social system, customs, law and so on. Human beings through these communities and ethical culture, constitute a complex human society.		
Spiritual Culture			

Table 2: Three-level of culture, Yang, 2007

As the enterprise or government unit is the main description object. So the three level of material, institutional and spiritual, will be the tools, business systems and entrepreneurial spirit, three kinds of content as a representative.

By summarizing the recommendations of the experts, it is understood that in the design of virtual idols, the design factors also have order difference. So this research not only in addition to adjusting the description of the table 1, but also add a figure, the degree of importance in accordance with the level of outward. Respectively, the virtual idol; appearance, costume, color; story and personality of three levels, and culture is covered by the design of the entire virtual idol, as shown in Table 3:

-	Table	3: The Character Design Factor Modeling				
		Framework				
Culture Virtual idol External Costume Color Story Personality						
	Design	Meaning				
	Factor					
Culture	Different partners will have their own unique culture, and the cultural background will affect the design of character. Which not only increase the relationship between the character and partner, but also make viewer increase the recognition for the character. Culture will not only affect one design factor, it will affect the all of them.					
External	Appearance	Since the main work of virtual idol is speak for partner, so the character needs to have a popular look. So it's important to unite the Internal design, increase the viewers impression of the character, and then to achieve the purpose of propaganda. That's the major goal. The costume design not only can fit the requirements of the				
	Costume	partners, but also can refer the partner characteristics to design costume. Plus with the Internal factor, it can design the most suitable character costume. So that can make viewers have stronger impression between the character and the partner.				
	Color	In color, it can use the visual way, to let the viewer have intuitive association between character and partner. At the same time, the character's personality will affect color choosing, so choose the right main visual color to is the most important thing of all.				
Internal	Story	Character story should be based on the description of the partner, if the partner description isn't clear enough, then viewers can try to close to the partner background story, in order to make the impression between character and partner become stronger.				
	Personality	The major purpose of virtual idol is to give publicity to the good image of the partner, therefore, the character personality can't be violated the social justice. In order to avoid viewer have bad image from the partner. The character's personality should be positive, which make viewer have a good impression for character.				

For the viewer, when virtual idols have an impressive appearance, it will naturally be interested with the character first. Then take the initiative to understand the Internal details behind the character, therefore the external design of the virtual idol will be very important.

In the external part, the design is necessary to focus on the information provided by the partner. Although the attention of the viewer is important, but radical design should be avoid. It will resulting the character appearance become uncoordinated, making the viewer loses their sense of identity to the character, and affect the endorsement of its virtual idol. The design of virtual idols must have a lot of reference data, and take a good balance in the external design of character, in order to make partner satisfy.

## **Case Analysis**

In the Expert Interview, due to this research through the correction of the external factor and Internal factor priorities, this research development the Character Design Factor Modeling. Therefore, this research will be based on Case Analysis to analyze the current virtual idol cases in Taiwan. This research will analyze the description of the character design and verify the contents of Table 2, and then modify and improve.

In order to analyze the reliability of the results, this research will use three different virtual idol as an analysis object. They are respectively, Xiaoqiong, XiaoMan, and Taipei 230. The research analyzes whether the model of this research conforms to the description of Taiwan's virtual idol.

# K.R.T.Girls – Xiaoqiong

The K.R.T.Girls – Xiaoqiong is Kaohsiung MRT virtual station manager, launched by the Kaohsiung MRT company and the Simon Creative team at December 2014. At first she was only the promote character as a short-time activity, because she is very popular and so she became a regular employee of Kaohsiung MRT. The setting details about Xiaoqiong please refer to Figure 2:



Figure 2: Character Setting

From the contents of Figure 2 can be understood, the setting details from the character "Xiaoqiong". Therefore, this research will be through the "Character Design Factor Modeling" to make a comparison with Figure 2, can be integrated the contents of Table 4:



By analyzing the appearance and text of the virtual idol "Xiaoqiong ", the Table 3 is fit with this character design factor.

## FuchengXiaoMan

XiaoMan is the virtual idol launched by Tainan Department of Culture & Creativity Community Union and Taiwan illustrator VOFAN at October 2016, the purpose of this character is to promote the tourism and culture of Tainan City. The setting details about XiaoMam please refer to Figure 3:



Figure 3: Character Setting

From the contents of Figure 3 can be understood, the setting details from the character "XiaoMan". Therefore, this research will be through the "Character Design Factor Modeling" to make a comparison with Figure 3, can be integrated the contents of Table 5:

# Table 5:



	Design Factor	Meaning	Is it Suitable
Culture	The design foc from Tainan's 1 city bird, mak Tainan City bec	Yes	
External	Appearance	Lovely, Cute	Yes
	Costume	With the Tainan traditional window grills dress, Phalaenopsis shaped hair clip, Pheasant - tailed jacana shaped fanny pack	Yes
	Color	Using summer tones to show the heat of southern Taiwan	Yes
Internal	Story	A student who living at Tainan and also like Tainan local culture	Yes
	Personality	Lively, Approachable, Positive	Yes

By analyzing the appearance and text of the virtual idol "XiaoMan", the Table 3 is fit with this character design factor.

# Taipei230

Taipei 230 is the virtual idol launched by Department of Information Technology, Taipei Government and Taiwan illustrator Arc at August 2015, the purpose of this character is to promote the business and relevant activities. The setting details about Taipei 230 please refer to Figure 4:



Figure 4: Character Setting

From the contents of Figure 4 can be understood, the setting details from the character "Taipei 230". Therefore, this research will be through the "Character Design Factor

Modeling" to make a comparison with Figure 4, can be integrated the contents of Table 6:

Table 6:

Reference Picture						
Reference Fridure						
	Design Factor	Meaning	Is it Suitable			
Culture	The character design is focus on the sense of science and technology behind the government unit, and show the spirit Yes and attitude of serving the people.					
	Appearance	Beauty, Elegant	Yes			
External	Costume	The costume with a sense of science and technology, The costume that highlight the temperament	Yes			
	Color	Using color full of technological feel	Yes			
Internal	Story	A information intern from the distant galaxy	Yes			
	Personality	A full of curiosity about the unknown, Approachable, Positive	Yes			

By analyzing the appearance and text of the virtual idol "Taipei 230 ", the Table 3 is fit with this character design factor.

# Conclusion

As technology advances, virtual idol is the new trend in the future. In Taiwan, a successful virtual idol must have an intuitive connection between character and partner. In addition, achieve the core objectives of publicity and promotion. In this research, after analyzing the virtual idols cases in Taiwan, it is concluded that the Character Design Factor Modeling has certain reference value.

Therefore, this research suggests that in the design of virtual idols is necessary to understand the core values and spirit behind the partner. Through repeated discussions with the partner to discuss and examine the results, the research is able to fully show the characteristics behind the partner. Thereby enhancing the corporate image. Furthermore, a virtual idol need to be manage in a long term, in order to create more value for the partner.

If designer and researcher want to learn more about the relevant issues, they can change the two research content right down below, to derive a model which is more completed.

- The main research object only from human type extension to multiple different types of modeling.
- This research is based on qualitative research. In the future, researchers can use quantitative research to make the content more reliable and complete.

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