CONSUMER GENERATED MEDIA AND MEDIA ENTERTAINMENT
- LATEST REPORT FROM JAPAN

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Abstract

The aim of this paper is to report the new progress about interactive media in Japan, to consider about the relation between technology & culture and to introduce my researches related this area of media: - this is the latest report from Japan about recent trends of media and entertainment. At first I will introduce new movements in Japan - "Consumer Generated Media" in Internet - contents by non professional designers/creators. Next, I will report my researches of media entertainment - (1) network musical session system, (2) automatic composition system for free contents, and (3) "physical computing" as design entertainment. Now the open source culture opens/supports the ability/ possibility for student/amateur as a designer. I will show some case studies of my students and some projects.

Key words: *niconico, vocaloid, interactive media, consumer generated media, media entertainment*

1. INTRODUCTION (BACKGROUND AND HISTORY)

Now, Facebook, Twitter and YouTube have become popular all over the world. However in Japan, of course Facebook, Twitter and YouTube are also popular, but quirky Internet culture called "NicoNico Video" is further prosperity. The foundation of "NicoNico Video" (NicoNico Video, 2006) was the anonymous BBS called "2 channel" (2-channel, 1998) which is still popular in Japan, but now the "2 channel" does not have much support from the younger generation. The interactive culture was born in Internet as BBS system - because the text media is small enough in the early days of the Internet when networks were so narrow. Next, still images (gif, jpeg) and hyperlink have expanded in Internet, and finally movie/video/game are commonly available because networks have grown widely.
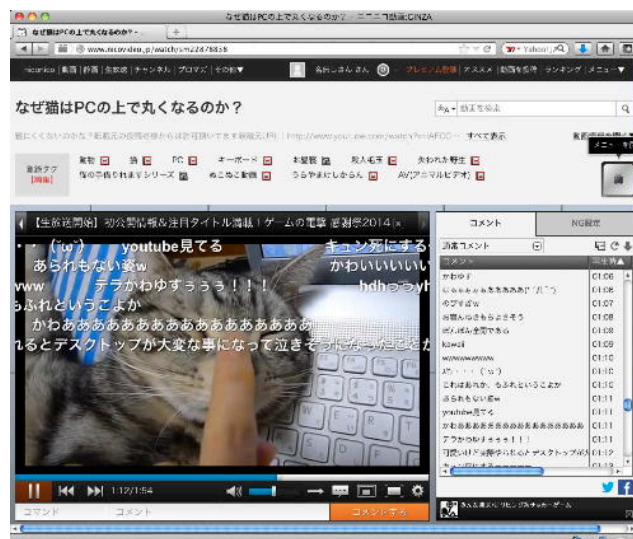

Figure 1: NicoNico Video.

The biggest difference of Nico Nico Video and YouTube is - people enjoy YouTube only by watching, but the audience of NicoNico can participate in interactive (Figure.1). At first, people can write messages just onto the video screen. Secondly, people reads other's messages on the video screen. Thirdly, people can write messages onto the video screen again in order to be read by other audience. Thus, many people can communicate with each other and construct one kind of "family/culture" with the video content. The expansion of affected impact from the video cannot be imagined by the author of the video. On the other hand, some authors of NicoNico Video deliberately aim the explosion of affects/cheers. We cannot enjoy this by traditional media like TV.

The essential topic in talking about NicoNico Video is the Vocaloid and "Hatsune Miku" (Figure 2). The Vocaloid was originally developed by Yamaha as vocal synthesizer software. The first generation of Vocaloid is very expensive and for professional studio musician, to replace from human studio vocalists to software instruments. The user of Vocaloid (professional musician) must construct voice database to synthesize vocal voice with teaching the system by registering many voice segments. In 2007, a software company Crypton released Hatsune Miku as an amatuer hobby software in music with very cheap price using the second generation of Vocaloid (Vocaloid, 2007). Crypton invested to own professional voice actor of cute girl comic to construct the voice database. So users of Hatsune Miku cannot register his/her own voice into the Vocaloid system, only can use the internal voice of the actor. Figure 2 shows the original character of Hatsune Miku, but so many images arranged, decorated and emphasized by amateur designers have been released in Internet.

Figure 2: Hatsune Miku (Vocaloid2). http://piapro.net/en_for_creators.html#prettyPhoto/0/

Then, Japanese young culture exploded with Hatsune Miku via NicoNico Video and "2 channel". Many amatuer creators who can draw images of cute girls uploaded many styles of Hatsune Miku. Many amatuer musician who can compose stylish/exciting/interesting songs by Vocalid2 uploaded many original songs of Hatsune Miku. Some amatuer video creators who can edit videos uploaded many original movies of Hatsune Miku. Some amatuer/professional programers released special free applications to produce 3D-CG animation of Hatsune Miku. So many contents about Hatsune Miku (image/music/movie/tool) were uploaded to NicoNico Video every day, and so many audience enjoyed, raved and communicated each other interactively every day.

The expansion of the Hatsune Miku boom and Japanese Anime/Otaku/Kawaii is continuing in the world (Google CM 2011) (Toyota CM 2011) (LA Live 2011). Crypton is now releasing with Vocaloid3 - Hatsune Miku (girl), Kaito (boy), Meiko (lady), Kagamine Rin & Len (twin girl and boy) and Megurine Luka (bilingual lady). The most important contribution to Japanese culture is that people have just discovered the possibility and pleasure with Hatsune Miku, not by traditional media (TV, stage, museum, etc), but by amatuer world like NicoNico Video. We call this movement as CGM (Consumer Generated Media) in Japan now.

2. GDS MUSIC

As a researcher and composer of computer music, I have reported many researches and have developed many special systems in this field (Nagashima 1993). Traditional computer music and electroacoustic music have needed special knowledge/skill in music. For amateur people who love music, I have developed some systems with improvisation using networks. Here I will introduce my researches about network session system with improvisation as a test case of CGM.
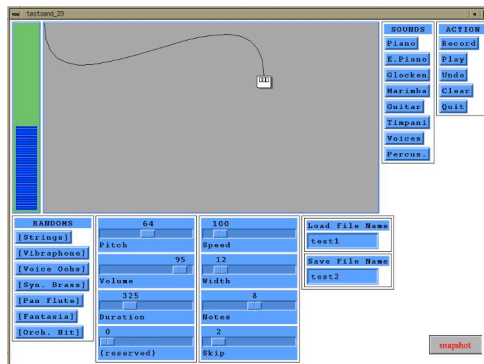

Figure 3: Screenshot of "Improvisession".

Figure 3 shows the "Improvisession", a performance support system for improvisational sessions with networks developed/reported in 1997. The system runs with 24 SGI Indy computers through LAN, and softwares were developed with Open-GL, OSF/Motif, and RMCP (Remote Music Control Protocol) by C language - RMCP was developed by Masataka Goto (Goto 2002). This system was developed and used in the lectures of students of music course of Kobe Yamate College (Figure 4) (Impro 1997). All performers can play their own phrases, and can broadcast their phrases to other performers with improvisation via RMCP.

Figure 4: Using "Improvisession" in a lecture.

A few years later, I have developed the next generation of the system as a commissioned research by Yamaha (Nagashima 2002). Figure 5 shows the "Improvisession-II" running on Macintosh computers via OSC and WiFi. Figure 6 shows the demonstration by 3 students in my Lab (Impro 2002).
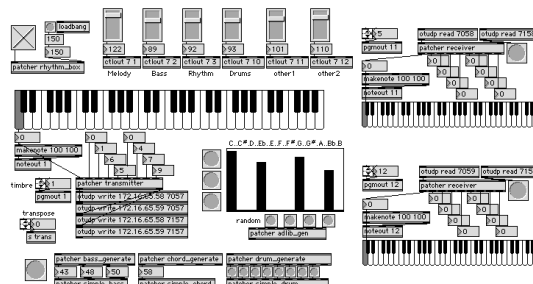

Figure 5: Screenshot of "Improvisession-II".

Figure 6: Demo of "Improvisession-II" in my Lab (WiFi).

This system was developed with Max/MSP (by David Zicarelli) using "Open Sound Control" ("otudp" objects) developed by CNMAT (OSC 1997). The "otudp" is a UDP object for PPC using Apple's OpenTransport networking system. All players can play their own phrases, can play with chaotic/ statistic generators and can communicate with other performers with improvisation via UDP/IP. As a difference from RMCP, the mechanism in which each user's time is managed in this system is unnecessary. Moreover, it is necessary to transmit no music performance information to real time like RMCP, and since what is necessary is to exchange only the parameter of the algorithm music generation which runs autonomously within each personal computer, the traffic burden of a network is mitigated.
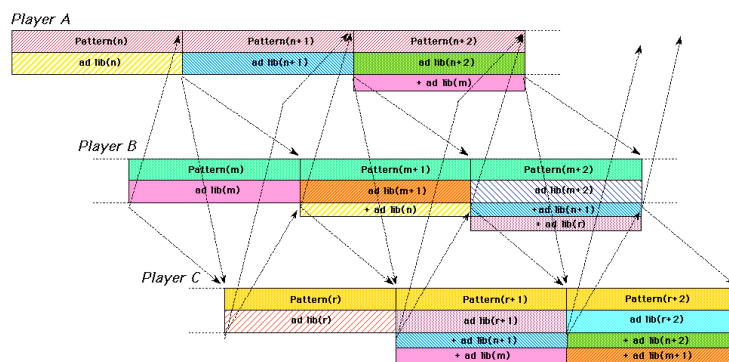

Figure 7: "GDS Music" model.

The most important point was the necessity of reforming the concept of the music on condition of simultaneity. Dr. Goto also advocated the concept of "the music which was late for the difference" in research called Remoto-GIG (Goto 1997), and the concept is extended further more flexibly and it came to build an idea called GDSmusic (Global Delayed Session music) here. I made unnecessary time management which RMCP demanded, and the users by whom network connection was made enabled it to enjoy a music session in the framework of GDSmusic, without caring about the delay according to each. Of course, for that, the concept of the simultaneity which was the traditional foundations of a music session is thrown away, and the new view of playing in musical session with "1-2 measures past shadow of a performance of the partner" is needed. Figure 7 show the concept of the GDS music.

3. FMC3 AND AF-RECO'TS

In Japan in 2001-2005, between "2 channel" era and NicoNico Video era, there was a boom of Flash movies. There were so many Flash movies in Internet, and many links and comments exploded in "2 channel" and other BBSs. At that time, copyright, portrait right and privacy was not considered as now. So there were many "underground" and "anonymous created" Flash contents. Almost amateur Flash creators could design/edit cool/interesting Flash movies, but they could not compose their original music. Very few amateur musician provided their free music, but almost Flash movies used music from TV/CD/radio without copyrights. Unfortunately this illegal manner could not be accepted, so almost great Flash movies disappeared under anonymous.

In 2005-2006, I have developed a new system and published all of it in the Web. It generates copyright-free smart BGM for Flash movie creators (Nagashima 2006). Unfortunately this website is written in Japanese, but you can translate it by Google et al. You can understand the musical expertise of the system from the website because I explained all musicological concepts, this system is a kind of a treasure trove of huge heuristics (Figure 8). Many amateur designers/researchers have used this tool for their video works, flash games and presentation movies to compose "free" BGM.
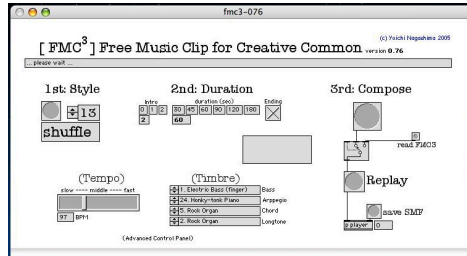

Figure 8: Screenshot of FMC3.

The key concept of FMC3 was to make "free" music for all amateur creators, and this concept have bloomed as CGM now. Here I will introduce another example work which relates to the same concept of CGM, created by my student of undergraduate class of my university (Yuriko Tosaya). The title of the installation work is "AF-RECO'TS" which means "Let's do after-recording !" (Figure 9) (AF-RECO'TS 2013). In Japan, so many young people love animation culture and voice actors. This installation work easily realizes the "after-recording" process of animation production for amateur.
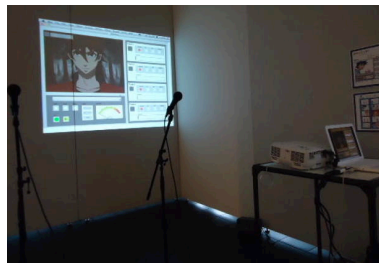

Figure 9: Exhibition of "AF-RECO'TS".

Figure 10 shows the instruction panel of the work, with the screen-shot and flowchart of the recording process. The source movie can be used - (1) original two stories created by the designer, (2) any quicktime movie which was created already. You can separate video-track and sound-track from the imported movie, and can record up to 4 new tracks to synchronize with the movie. You can select and mix sound tracks you like, and finally merge and export to quicktime movie with movie-track and all sounds. As the CGM concept, we can upload the movie to NicoNico Video or YouTube, and we can exchange graphic/sound contents with each other. The created (arranged/exchanged) contents are all "original", and there is not any traditional copyright. This is the new generation; "let's share everything created, let's become happy together, let's create new media".

Figure 10: Manual of "AF-RECO'TS".

4. PHYSICAL COMPUTING AND DESIGN ENTERTAINMENT

So far, I have introduced the movement that amateur people create software (media/contents/program), but the culture of Open Source has spread to the field of hardware. The new concept called "Sketching" or "Physical Computing" has became popular in the 21st century. Both of "Sketching" and "Physical Computing" has the same idea in this field (Figure 11) - means and aims "Open Source Hardware". This is an evolution style of prototyping - is not limited as traditional "private" prototyping, but is growing as "open source" prototyping. Recent hot topic "3D printing" can be said as a hardware version of "Sketching".
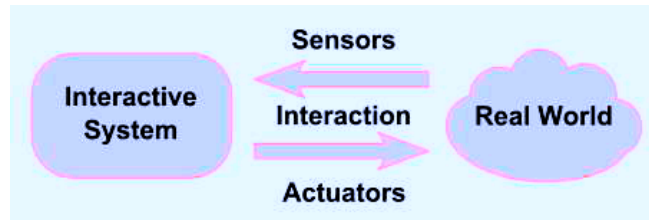

Figure 11: Concept of "Physical Computing". http://en.wikipedia.org/wiki/Physical_computing

I am teaching design/electronics/programming in my university, and I will introduce recent project in order to understand "Sketching" as expanded concept of CGM here. A new project was organized in 2011 with five students, and we collaborated to develop special musical instruments. At first, students produced (remake) instruments with free idea like musical improvisation. Next, we discussed the style of the performance, and decided that they (performers) will each have a theme-color on the screen and each will also have a main part (instrument) sound in the space of sound. Only as a programmer of this work, I developed a new system/environment which assigns graphic/music elements to the screen/PA in real-time, by arranging information from all instruments (sensors) of the performers. On stage, they created the live performance with interactions by each improvisational control, and they easily recognized the situation by the screen.

Figure 12: Jaminator (left) and "Jami-Girls' Band" (right).

The "Jami-Girls' Band" (Figure 12) contains 1st grade five students. Firstly, I got many "junk" Jaminator (electronic toy guitar) in e-auctions at very low prices. Then, we opened the Jaminator and removed parts from it and analyzed the system electronically. Then, we modified the circuit and remodeled the Jaminator (Figure 13). We removed the mother board and replaced to Arduino. The scan lines of the keyboards/switches were connected to Arduino's I/O ports, and we add the small high-power RGB-LED (PWM controlled) at the top of the neck. We also add the 2-D acceleration sensors inside, and a MIDI interface to send information to the host. Students did not have sufficient knowledge of electronics, so they could only assist, but they studied and learned a great deal.
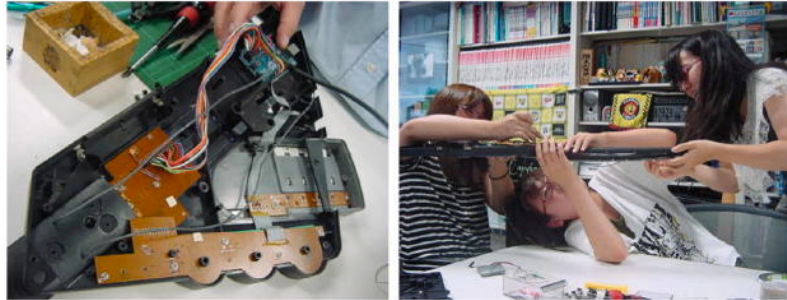
Figure 13: Arranging and remodeling of the Jaminator.

The title of the work was "Revolution-J", and Figure 14 (left) shows the conceptual sketch of them. As "eggs of creator", students produced movies and images for the graphic part of the performance, and recorded many sounds from mobile phones as sonic materials (see Figure 14, right). This is just example of CGM, and they enjoyed the create process of their performance as entertainment (Jami-1 2011). The performance was a kind of battle-session game of sounds and graphics on stage.
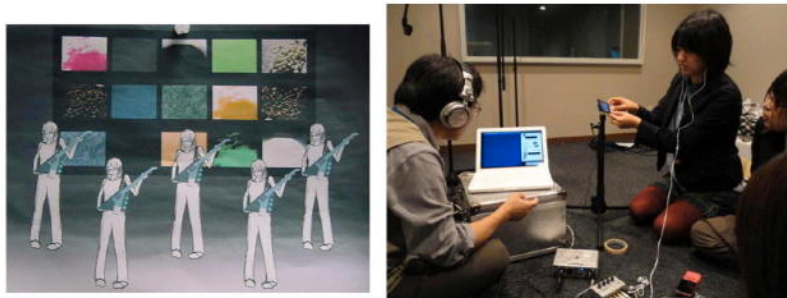

Figure 14: Conceptual sketch (left) and the recording of sounds (right).

They premiered this work in the "Inter-College Computer Music Concert" (Tokyo Metropolitan University) in December 2011. The second performance was in the "Make Ogaki Meeting 2012. The performance video of this project were uploaded to YouTube (Jami-2 2011), and many specialists and musicians gave positive evaluations. Interestingly, the professional designer who created Jaminator (IDEO studio, US) sent us a praise after watching the making/performance video. This is the extended interaction between creators and arrangers, and expanded idea of CGM.

5. DISCUSSION

Here, in both software/media (limited) and hardware/system (extended), we can experience the great possibility with the concept of CGM. Now we must extend the idea of "copyright", from traditional "1st creation" to new "n-th creation". If a creator uploads her/his original movie into NicoNico Video and it is superior, many audience will praise it - this is the 1st creation (traditional). Then, a creator who is superior in graphics will add/arrange/exchange better graphics to the movie and upload into NicoNico relating with the original. Or, a creator who is superior in music will add/arrange/exchange better music to the movie and upload into NicoNico relating with the original. Or, a creator who is specialist of voice actor will add/arrange/exchange better voices/songs to the movie and upload into NicoNico relating with the original. They are called 2nd, 3rd, ... n-th creation from the original movie, and better works in most cases. Almost audience of NicoNico enjoy the growing/metamorphosing process itself and praise them, and creators (original and n-th) also enjoy the community. No one claims traditional copyright, and everyone will be happy.

This revolution of concept of copyright is now steadily expanding in Japanese culture in Internet. Nevertheless, traditional media like TV, radio, theatre and paper-media do not notice this circumstance because people in the traditional media is not young in mental. In Japan, young people do not subscribe to the newspaper and they do not watch TV. We all have same 24-hours in a day, but young

people prefer to spend time with Internet. Along with the concept of Global Collective Intelligence, this cultural situation is not bad, I think. We cannot think/create big step by ourself alone, we can do in our community and culture. The evolution of microelectronics and networking have produced on the earth - Internet, Wikipedia, Google, Youtube, Twitter and Facebook. In this era, we should accept the new change actively in culture. The new concept of CGM and Open Source will be accepted in human civilization in the future, and traditional concept of copyright should be decayed.

6. CONCLUSIONS

I reported the new progress about interactive media in Japan, to consider about the relation between technology & culture, and to introduce my researches. The new movements in Japan - "Consumer Generated Media" in Internet (contents by non professional designers/creators) will expand into the world. This movement will destroy the traditional concept of copyright, with the Creative Commons and Open Source culture. We will get interesting/exciting culture to exchange/interact each other in Internet in the future.

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