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Master's Thesis

GROWING DOCUMENTARY

New Framework Design of Documentary Film Production

by

Annisa Mahdia Pratiwi

Submitted to the Graduate School of Media Design
in partial fulfillment of the requirements for the degree of

MASTER OF MEDIA DESIGN

at the

KEIO UNIVERSITY

Academic Year 2012

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Bachelor Design

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Annisa Mahdia Pratiwi

Submitted to the Graduate School of Media Design
on August 7, 2012, in partial fulfillment of the
requirements for the degree of
Master of Media Design

Abstract

Documentary films have become very important ways of bringing in edutainment, that is they are used as a tool to not only inform but educate people. These forms of edutainment could also be used to help change the world into a better place while enlightening the world as to what is going on around them as is one of the objectives of the Growing documentary. The growing documentary even gives the audience a chance to contribute to the story being told and to sharpen their film production skills.

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Keywords: Documentary, Open Source, Volunteer, Crowd Sourcing, ICT, Management, Film, Production

Thesis Advisor: Professor. Masa Inakage
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Chapter 1

Introduction

1.1 Background and Motivation

On March 11 2011, Japan was hit by a very big earth quake and tsunami that caused a very big damage not only for Japan but also affected many people around the world. It happened with the magnitude of 9.0 and 40.5 meters tsunami in Miyako, Sendai and travelled 10 km inland. Japanese National Police Agency report confirmed 15,854 death, 26,990 injured and 3,155 people were missing across twenty prefectures. About 129, 255 buildings totally collapsed, 254,204 buildings 'half collapsed' and another 691,766 buildings partially damaged. Earthquake and Tsunami caused damages and effects for example many ports were briefly closed, dams and water, transportation, electricity, telecommunications and many other elements. [40] Fukushima nuclear power plants were automatically shut following the earthquake and some of the plants also got into a serious status following their failure of the cooling system and causing the meltdown and radiation. [33] Seeing all the damages, the most concerned actually were the mental health and all the survivors. All the world paid fully attention to Japan. Everybody were really concerned. Many volunteers and helps were being donated and distributed for Tohoku people even until now.

Mass Media held a very important role, to deliver every single news to the world. The power of audio visual and also journalist reviewed that mass media had always be a tust-worthy resource that the audience always waited. In case of what happened on 3.11 Japan big earthquake and tsunami, some news broadcaster did not inform news that relevant to the real things happened on the location. [7] This actually became a problem in some places and community. For example, some news did not explain about the coverage of the destruction, so people outside Japan imagined that Japan was totally destroyed. The most exaggerate news was about the Fukushima Dai-Ichi explosion and radiation that has already infected the whole Japan. At that time some news also said the radiation effect was bigger than what happen in Chernobyl and the water in Pacific

ocean was contaminated. Another media also mentioned about the wrong number of the survivors. It was exaggerated since the news were published without any statement or based on the scientist report that examined the area. This kind of news might make the audience trapped and distracted. This happened because at that time, NHK was the only news that was comprehensive and trusted. Unfortunately not everybody could access news from NHK, not only because of the language barrier but also the network problem and time differences. Local news caster from every country tried to deliver the news, but since some of them were more than 3rd agent so the news they got were bias.

Mass media is actually not the only way to deliver news or any messages. Nowadays people have already used social media as information tools. The users attempt to visit their friend's page or website and observing their update such as links to Universal search, scrapbook, messages, testimonials, photos, videos, personal profile and community. [11] Social media become the fastest information sharing system, but the actuality and the validity have to be concerned because somehow users are just expressing their own opinion rather than factual post. [10] They take any film or videos from the video source like youtube.com or vimeo.com and share that on their social network account or blogs to make their post looks more authentic. One of the contents that also posted is documentary film.

Lately documentary film become one of the most chosen medias to capture an event and to deliver any public errand. Documentary film is usually targeted to be shown on television, published on DVD or Blue Ray or for indie-documentary film via video share website, with large scale audience and any educational background. Some films have specific audience and it divines by the content of the documentary it self. But the common documentaries are always having filmmaker point of view to deliver a message. The challenge is that how documentary can be a messenger with a bigger format, in this case 4K format [5] and how to make the audience are more involved to the narrative it self.

Comparing with broadcasted news or another mass media, documentary film actually has more advantage because documentary film has no limitation regarding to duration, narration, journalist, and content. Documentary film can actually allow the filmmaker, and eventually the audience to become immersed in the events being reported.[8] Taking this point of view, indeed documentary film is a prospective media to deliver a story.

Now the question is, how to make documentary film is more popular in community and also make people participate more to the content.

1.2 Defining Documentary Film

A documentary film is a non-fiction film that attempts, in some way, to document reality. Even though the scenes are carefully chosen and arranged, they are not scripted, and the people in a documentary film are not actors. It is usually edited and representation of actual (not imaginary) subjects. Documentaries content is divided into information documentary, entertainment, criticize, and celebration. All documentary film actually an inform type, but nowadays they put more entertainment side to hold the audiences attention. Documentary film tries to build some perfective to their audience by giving the filmmakers point of view inside the film. Documentary film is always mediate between reality and the viewer.[26]

Documentary filmmaking has a long history of potraying everyday life in ways that leave the erratic, elusive fabric of the everyday intact and this maybe valuable as interaction design currently embraces issues of engagement, expression and aesthetics.[2] In making a documentary, filmmakers select the subject or subjects then they have to do locating and selecting the possible sources from a huge variety. From those material they than make the structure into narrative or non-narrative and use various filmmaking techniques. The material that which is usually included as supporting artifacts are photos, film clips, any informative language such as narration or interviews or both.

Nowadays, digital audio-video technology is relatively inexpensive, so many people started to make their own documentary film. Format that usually being used are DV, HD and Full HD. Documentary film usually consumes less budget as much as possible and mostly try to use portable equipment for the production to make it more compact and less intrusive.[3]

1.3 Thesis Objective

This thesis aims to facilitate the user collaboration in documentary film production that can grow depending on the audience feedback and crowd source base workflow. This would be a project called Growing documentary.

Since Growing Documentary project is a unique video production project, this research will be explaining about detail of the project itself and the mechanism of documentary film production using mix production element. The primary goal of this research is the grand design of growing documentary production concept for the future filmmaker to use. The proven would be how Growing documentary concept is actually could really be a part of the production and bring forth a documentary film that can be served to the audience.

In this project, author roles as the grand designer and get involved to the production as project manager/ project leader and editor.

1.4 Thesis Overview

There are six chapter in this research which is presented on the structure in the figure below.

Figure 1.1: Thesis overview.

The first Chapter examined the background, motivation and also objective of the research. Literature and Related project are described in Chapter 2, and this relates with research background which is related to the studies on documentary film production management, crowd sourcing, and sharing platform technology that compatible with the research. The method used for the concept of the product, growing documentary is addressed in Chapter 3. Chapter 4 and 5 describe the implementation of the concept of growing documentary and all management production related works. Evaluation of the final film will be addressed to the production crew and also the audience, and this is discuss in of Chapter 6. The final chapter, Chapter 7, concludes the research and also explain the need for the future work of developing growing documentary.

Chapter 2

Background Review

2.1 Literature Review

Documentary film is not something new. Collaborative production on documentary also has been done. The growing documentary project has to take a look from the related project that might inspire the grand design of growing documentary itself. From this study, growing documentary is expected to be a cutting edge documentary film production and community product.

Working as a volunteer in a digital world and in a crowd-sourcing framework, is something uncommon or not well-known by public yet. However, crowd source activity is currently being used by many medias, specially film and television industry, to support their metadata schema or data storage. Somehow this industry also use the power of social network by reading their user behavior to do tagging or doing ratting for a certain product. The most important aspect to keep the working framework is communication between the volunteers or the workers. Anyone who is involve in the project who are being involved to the project needs to understand how to communicate in the same "language" or semiotic.[19]

Crowd sourcing frameworks has already been used on film and mostly television data. The crowd source function is to help detail indexing process of TV programs or sequence analysis on film. The crowd source activity is being really useful for the production and it brings the audience or online fans to get involve and interact with the program or film that they like. To support the activity, crowd sourcing frameworks is utilize technology to reduce the barriers between amateur crowd sources and crowd-sources from professional background.

On this industry, crowd sourcing is actually developed as a strategy for accomplishing large scale, collaborative work, several distinct incentive models have emerged. In

many projects, people are paid to do the project's task. In other case, crowd source came from fans community and participation in a project because of a conscious desire to contribute to the mission of that project. Projects that use this kind of frameworks are usually related to information sites about some films or any infotainment and edutainment related such as wikipedia, OpenStreetMap, wookiepedia, Harry Potter wiki and many others site. Film and television become the focus of intense interest by large number of fans, scholar, aspiring filmmakers students, and others. This crowd source projects were prominent not only in film and television sector, but also IT and technology development, for example the biggest crowd sourcing in computer, Linux operating system. It grows and has a large self-supporting community through their online forums, chat rooms, mailing list and news group. French Philosopher, Pierre Levy describes this phenomenon as "collective intelligent".[35] The new forms of community participation invite every people to a new community literacy. It is an entertaining way to define culture to make peoples ideas portable could be shared. [32] Possibly this kind of movement is part of the digital revolution where all the crowd source activities are basically technology base with website and any other cyberspace.[14]

2.1.1 Crowd sourcing framework and theory

Crowdsourcing is the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call. - Jeff Howe, 2008

As the Crowd-sourcing framework already being used in some projects, specially on film and television, there is theoretical work that offers potentially valuable strategies that are informed both by open source software development and the most recent emerge of community base and social network services. From a literature written by Gary Geisler and team, [12] they outlined their framework for a crowdsourced system for film and television indexing with reference to Kazman and Chens Metropolis Model. In contrast to traditional projects that arise from the bottom up and in which the contributors and requirements are relatively stable, the Metropolis Model speaks specifically to the creation and maintenance of crowdsourced systems that encourage open and collaborative participation. Based on a set of roles and relationships, the Metropolis Model suggests that a crowdsourced application targets three user types, designated by level of involvement: kernel (project developers), periphery (prosumers), and masses (customers).

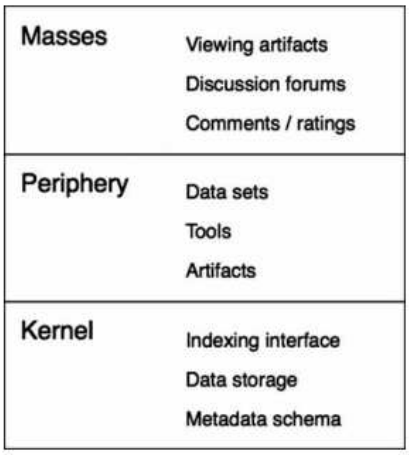

Figure 2.1: A crowdsourcing framework for the production and use of lm and television data.

Metropolis Model is a new logic for development of crowd sourced systems. It is basically used in crowd sourced-software design working, but this theori is being used for another crowd sourced project.

The Metropolis model offer a set of principles on which a new system-development modelmore appropriate for the service-dominant, crowd sourced worldshould be based. From the analogy of the word metropolis that means city, it is deliberate as a new form of producing systems that more like constructing a city than a single building, a perspective called ultra-large-scale (ULS). ULS systems are like cities in that they are not conceived or built by a single organization, have no centralized control, and are continuously evolving. [28]

The Metropolis Model is their attempt to describe and prescribe the principles surrounding how such systems might be created and sustained. It offers a unified logic for reasoning about and managing system development for the two major forms of crowd sourced systems. Content according this paper mentioned that the crowd source framework is use for software management and development. It is also written that the Metropolis Model clearly applies and utilizes to a large and fast-growing set of software-centric systems.

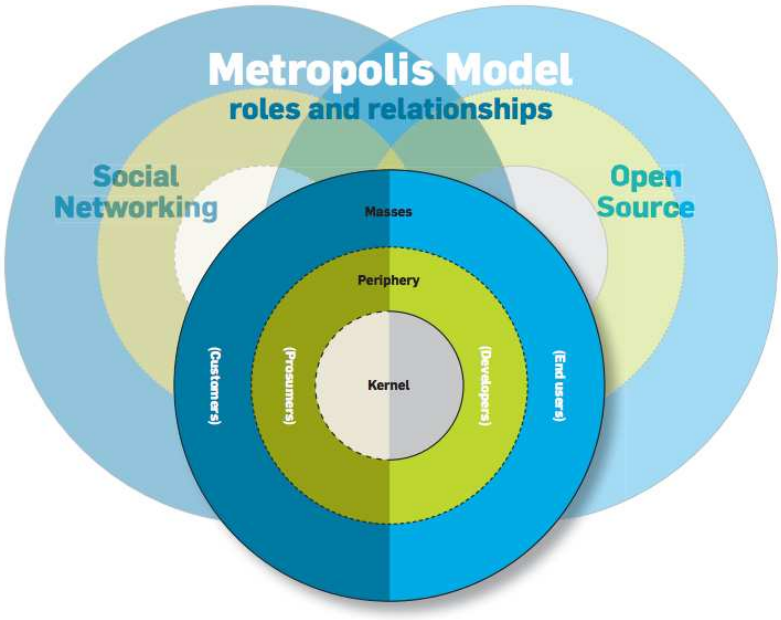

Figure 2.2: Metropolis model, roles and relationship.

Something unique about crowd sourced project is that there are millions of unpredictable contributors working without remuneration bring into question the relationship between financial incentives and data quality. In a crowdsourced system, users with different skill sets and expertise must cooperate to create high quality work, said Geisler on his paper.

2.2 Related Project

2.2.1 The American Revolution

The American Revolution background started in the year 1968, when American WBCN-FM was born. The radio has big impact to the society because WBCN began to be a hub for pop culture as well as a facilitator of social and political interaction, promoting dialogue around some of the most pressing issue of the time. [9] In 1973, Bill Lichtenstein on air for the first time on WBCN and this lead him to an idea to make a documentary film about the American Revolution in revolutionary mix of rock music, politics and news that will forever remain a defining texture in the social fabric of Boston.

Figure 2.3: The american revolution website banner.

In 2005, Bill Lichtenstein started the project. To support the project, Bill Lichtenstein and his colleagues began to collecting datas and started the idea of using crowd-sourcing archival material from WBCN listeners and supporters. Bill Lichtenstein compiles all the material into a virtual archive that will not just be in the documentary, but will also available to the public and to scholars that interested in learning about that time period and contributing as learning process. This became the first documentary production using on crowd source platform, and WBCN became more than a cultural innovator.[21]

On that time period, technology is very limited. There are no Facebook or Twitter that could be a communication bridge to the audience. But since WBCN-FM has many loyal audience, so it became an enabler for dialogue, collaboration and action. This make WBCN became a very effective media to deliver the message and make Lichtenstein and his colleague worked harder to designed media for impact. Liechtenstein always believe that media has many potential but public needs to know how to use those media effectively.[27]

Time passed by, when the technology became more accesable, Bill Lichtenstein created a website to compile datas from the WBCN-FM listeners and supporters named kickstarter.com. [20] But after the film is finished, kick starter developed into more general art project for anyone who wants to make a project and needs donation. Kick starter project turned into world's largest funding platform for creative projects. The characteristic that was seen from this step is describes as figure below.-figure

Figure 2.4: The american revolution behind the scene.

Media can empower people to take action, and American revolution demonstrates this in both it's subject matter and production strategy. Indeed this could be a learning point for public to be more creative and play active role in shaping the history and future.

2.2.2 Tohoku and it's documentaries

2012-Fuji TV,director Gaku Narita, Ridley and Tony Scottare asking that the people of Japan pick up a camera on March 11th to tell their own stories for a massive documentary project being calledJapan in a Day. The project will join the growing number of crowd-sourced docs likeLife in a Day(which was also produced by Ridley Scott) and the burgeoning world of Post-Tsunami filmmaking.

This documentary film is originally a dedication for Japan after 3.11 earthquake and tsunami, and wanted to show the audience how Japan is actually already back to "normal condition". The goal, as with other films like it, is to get a ground-level viewpoint of the everyday in Japan to show the beauty of banality.

Figure 2.5: Japan in a day banner.

Its totally open source crowd source method of gathering footage by spreading the topic via Youtube and Facebook. The task was easy, audience has to capture a video or picture during 3.11 2012 within a day with anything anywhere in their daily life. After having the footage, they have to upload the footage to their portal project via youtube upload. Videos will be featured ontheir official Youtube page, and their team will assemble clips into a feature length film for a Fall release in Japan to be followed by an international release sometime later.

But my hypothesis is this is one stop documentary about what happen in Japan this year on 311. No concept of continuity.

Another project about Tohoku was "Kyo-o mamoru produced on 2011 by Yuka Kanno, A student from Yamanashi Prefectural University and lived in Rikuzen-takata in Iwate. Her home was destroyed by the tsunami and she also lost her friends who had been her classmates in junior high school. [23]

Ky-o mamoru exposed the lives of people who were affected by the 3.11 Japan earthquake and tsunami. Kanno interviewed people in her hometown, including her parent, her childhood classmates, and in order to record their lives after the earthquake. The film was first presented at Yamanashi Film Festival in 2011, and it has been shown throughout Japan and was able to be previewd worldwide. [13]

Figure 2.6: Kyo o mamoru, behind the scene.

The English subtitles for this film were created by over sixty students in Japanese language classes at twelve different schools in the United States. The project leader is Professor Kazumi Hatasa. Professor Atsushi Fukada provided technical assistance. My hypothesis is still the same that this is one stop documentary with an HD format and no concept of continuity.

2.2.3 The Johnny Cash Project

The Johnny Cash Project is a global collective art project. Through the website, they inviting collaborators to explore and express their thought about Johnny cash. Working with a single image as a template, and using a custom drawing tool, the collaborators will create a unique and personal portrait of Johnny. Their work will then be combined with art from participants around the world, and integrated into a collective whole: a music video for "Aint No Grave", rising from a sea of one-of-a-kind portraits.

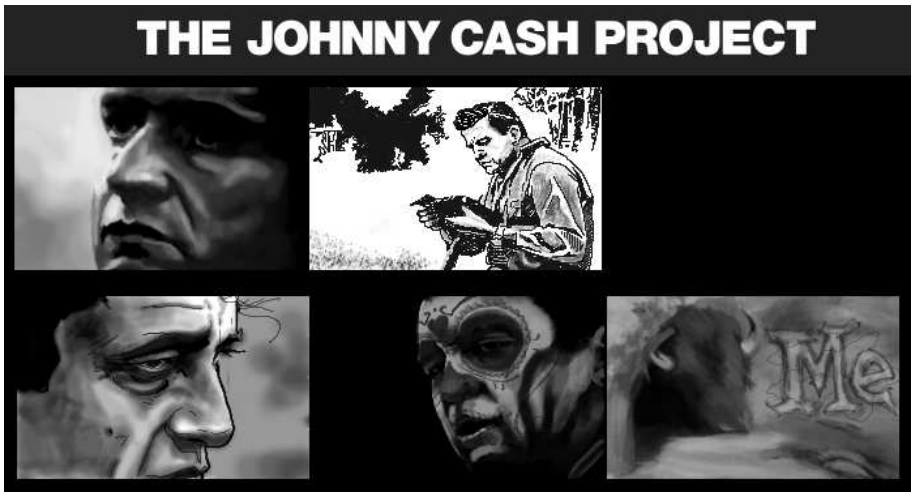

Figure 2.7: Johnny Cash project.
[4]

Strung together and played in sequence over the song, the portraits will create a moving, ever evolving homage to this beloved musical icon. Whats more, as new people discover and contribute to the project, this living portrait will continue to transform and grow, so its virtually never the same video twice. [4]

Chapter 3

Design and Concept

3.1 The Growing Documentary

This research aims to create a unique documentary production frameworks that could facilitates many groups or even crowd source element to collaborate together inside one documentary film. With this concept, content on a documentary will be more colorful, has more input and come out with different point of view.

The main concept of this documentary is, how to make the film contents that can be remixed, reworked and built upon a story that story tellers can change and adapt the story. The production and the revolution of the growing doesn't have limitation of time. Every final film and all used data will be shared as common public license and credited to the contributor. In this way audience can keep adding more and more datas and stories that related with the event that being captured on the documentary.

Ideally, in the future - this project can provide and gather many data in terms of digital video, photos and also another format document that has historical record with any format that rely on the future research. To do so, this documentary project is supposed to use the cutting edge technology and format that would possibly become a standard format in the future. This can also give more impact for the audience when they see the documentary.

After we have got the basic idea and came out with the concept plan, the next step is to form the grand design of this project. Since the idea is to make dynamic narrative documentary with the growing story based on audience feedback, we named the project Growing Documentary. (Fig. 3.1)

Figure 3.1: Growing Documentary logo.

Growing Documentary is a unique concept to facilitate a documentary film production by collaborating two or more production team and even crowd sources that possibly never be inside or related with the main production team. The Growing Documentary involves many people from different background as resource personnel, to provide data that is integrated in the construction and development of the documentary itself. The content from one film can continue to develop and lead to another documentary film within the same path. [18]

The documentaries are created by utilizing the Growing Documentary platform aim to dig out the existing problems in society, looking at them from different angles to verify the data. In the future they may serve not only as a historical records but also as resources for academic research. The data collected in the form of video, audio, photo, text, etc. are compiled as one high quality documentary film.

Once the first documentary film is completed, it will serve as a means to gather more data from the viewers. Through a community portal and/or SNS, comments and feedback can be collected. If there is enough new content generates from this feedback mechanism, this will lead to the production of a new documentary film. Each film that has been produced is able to be recycled or to be reused as RAW material for the next film as long as the producer put the credit of the previous film on the new film. The key to the continuation of the Growing Documentary process is the audience's feedback and participation. This makes growing documentary actually different from another documentary. Each element inside the process will give many ways to end the narrative of growing documentary.

In the future, growing documentary is projected to be able to cover any kind of humanity and social problems. Growing documentary wants to explore and expose the problem. This also send a messages from people who are related to the problem. Increasing people motivation through another story using documentary film will hopefully make this project get many attention form many audience.

Growing documentary volunteers target is social network user. Using social network service, we can catch the people's attention and those who are interested in joining the project. When they have interested on this they will be willingly join and their interest will lead them to be involve to the project. Because the documentary will keep growing, this can also be a reminder for each audience about the problem that the documentary is brought.

Growing Documentary basically doesn't require any special format to reaches it goal. Photos, videos, data in any format should be considered as the source received from the contributors. But for the production of the first iteration, growing documentary wants to get more impact from the images on the film so that the film has to be produced as highest format and scalable. Currently 4K format is the highest standard and used to effectuate and expose the narration through a stronger visual. From the previous research [6] , 4K formats film has more power to deliver a visual to audience. 4K formats film indeed has about 4000 pixel that can deliver the visual 4 times bigger than HD size. (Fig. 3.2) The same research reveals that 4K format digital cinema is actually not sufficient in this era, but since growing documentary tries to catch and to document the moment today to be revered for the future research, it will be an important aspect to be considered.

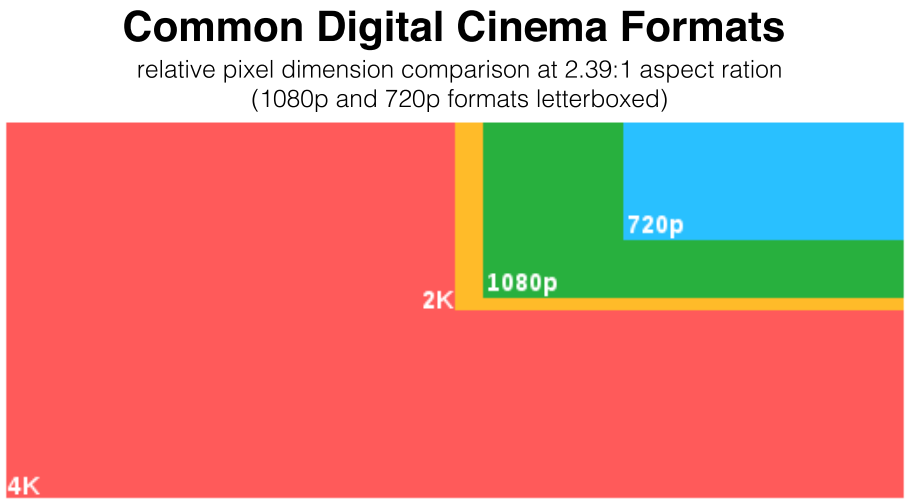

Figure 3.2: 4k resolution-ratio.
[36]

3.1.1 The Growing of Growing Documentary

Growing means natural development by increasing in size and changing form, becoming larger or greater over a period of time. Similar as Growing Documentary, the documentary that been made will grow depend on the audience feedback.

Growing documentary tries to answer the audience question. For example, if we have one documentary film, the audience can give their comments, critics and inputs. Those input will be used by the next filmmaker as content for the sequel or any growing of the related topic. The growth doesnt have to be horizontal or vertical, it can grow in any ways.(Fig. 3.3)

Using the social media, website and open email platform, these will allow the audience to have a discussion with the filmmakers or the crew about their feedback that might be the next idea of the iteration. A sharing platform has also been provided to gather many data from the prosumers, and this makes people are actually allowed to help the filmmaker to build the story line. This concept is only can be proved by the running time, how actually growing documentary raises many responses from the audience, have many collaborators and produced film using this way to extend and develop the story of any particular theme. However in this research, the numbers of collaborators and number of film that been produced are the result that need to be waited as the factor of evaluation the growing of growing documentary.

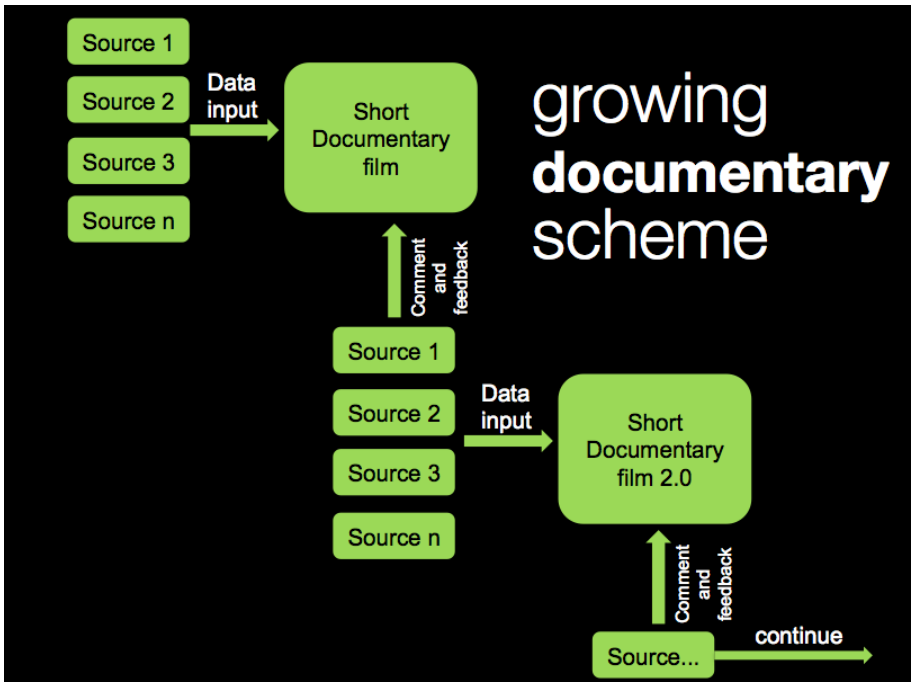

Figure 3.3: Growing documentary scheme.

As the growing documentary allows the contributor to get involve to build and growing the story. The growing documentary it self provided the comment box and email for the audience to response each film that been produced. From these comments and all data that being sent by the collaborators via cloud server, collaborators can take that as an inspiration to start to build another story within the same path using those material. Growing documentary wants to facilitate the filmmakers to produce a documentary film so that the production will be faster, easier and effective. At the beginning of the production each film needs to have initiator to start the production. The initiator can be anyone who has initiative and idea to develop the story. They can role themselves as a producer, director or anybody. In the future growing documentary network will facilitate the initiator to be the bridge between them and other collaborators.

Inside the production of each iteration of growing documentary project, like another film production, there will be a director who be responsible for the production and also the quality of the film. Even though the theme comes from the feedback of the audience, the director surely has the right to determine the flow of story on each film and also has discussed the content with all collaborators. This is because the production collab-

oration is the main agenda. The director and probably the initiator should be able to manage the production by understanding the flow of working with growing documentary mechanism. With this, the quality of the film would supposed to be manageable. The quality issues might become a concern in the future, but as any other film production, the good and the bad film judgement will be considered by the audience review. In this case, rating is also needed to be added in the final process of the documentary film.

3.1.2 Challenge

Growing documentary as a mechanism that facilitate the user collaboration in documentary film production, has many important points that need to be considered. But since the system is still new and there is no production use in this kind of platform to produce a big scale movie, so growing documentary has to find the problem and tries to make problem solving design.

This mechanism tries to cover some elements that basically has difficulties since those elements were usually depending on the budget or human resources. Those elements are as follows:

1. **Production crew**

   For a normal production, production crew is very important because human power is really needed on the production. The problem in this production is that this production need people who understand how to produce high quality images and formats. This people have the ability to deal with an unexpected area such as disaster area, or any difficult area that might not be able to be reached by ordinary production crew.

   To find that high standard production crew is not relatively easy and it is very expensive.

2. **Production equipment and Technological Aspect**

   Producing a high quality image and video, needs high quality equipment. Not only for the production, but also the technological aspect of equipment for editing and also rendering.

3. **Production budget**

   Production budget is the most important element. But since the production unit is not a big film production company, it's a little bit hard to find sponsor for the first iteration. Moreover the mechanism of the production is new and totally different

from the average production company. It is not a public secret anymore that documentary film usually has to deal with minimum production budget, since the sponsor company sometime thought that this product won't have a selling point to the market.

4. **Local story**

   Growing documentary wants to be the middle genre between news and normal documentary film. To get that target, the authenticity and sharpness of the story become a selling point. That is why local story is really needed. How to get the story is also an important thing to be concerned.

5. **4K formats**

   The iteration for first and second iteration of Tohoku project had already been decided by using 4K formats. 4K formats footage is still uncommon and not standard formats. It is usually produced with a high quality camera or another high price equipment. This was also discuss how the production can actually produce a problem solving for this particular problem using crowd sourced power.

3.1.3 Problem solving design

There must be a problem on the design process. And as it was written on the previous subsection, there were some challenges had that already been faced by growing documentary. To find a problem solving, SWOT analysis is still competent to be used. On the figure(Fig. 3.2), it is shown how the growing documentary project actually has many potential points that can be come a winning point to reduce the challenges.

To reduce the weakness elements but still have equal quality as a high-end film production, a documentary film production need to design needs a new production management workflow. By using the strength of having knowledge of production, the management workflow become easier to build. The other challenges, from the threads and weaknesses, are supposed to be able to be reduced by using the opportunities. The power of ICT and networking would be able to connect to many people in many kinds of background and this kind of technology can help the production to gather crowd source data and the people who wants to work for the production as a volunteer collaborator or contributors. The crowd sourcing can be the main element of the production since they might cover any weakness point that growing documentary has.

On the workflow of the production, there will be people who are in the same location as the people in in-house production unit, and people from audience as a crowd sourced unit. The work should be a mixed production, collaborative work between two units. The work that really needs direct communication and control will be handled by in-House and the rest will be shared to the crowd. Indeed, in some conditions, for example legal issues, the projects need to concentrate and make efforts to make some lobby to solve the problem.

Figure 3.4: Growing documentary SWOT Analysis.

Chapter 4

Iteration: ”lenses+landscapes”

The first iteration of the Growing Documentary was a short documentary with 10 minutes duration and 4K (4096x2160) format, about 3.11 Japan earthquake and tsunami. The story was taken from the point of view of three amateur and professional photographers from different background of life who were all affected by the earthquake and tsunami. The film, lenses+landscapes, was produced by the crowd-sourcing of the photographers, translators and audio via social networking services (SNS).[17] The production was led by Power of Motion Picture - 4K Narrative sub project and Janak Bhimani was the director of the film. This team was called in-house production unit.

The idea of using crowd-resources originally came after the in-house production team found that there were some problems to produce a standard production.[30] The biggest challenge was how to bring production equipment up to Tohoku. The condition of Tohoku at that time was still fragile and the transportations were not being normally operated. This made the production budget raised a high number. However, the production still need to be done.

4.1 Pre-production

The first step that the project had, was to make a basic concept of the production. As any other film productions, ”lenses+lenscapes” had to pass the pre-production process to find the concept and a good workflow for the whole production. As this was the first prototype of growing documentary and had been produced with a short time deadline, the production unit had to do every single steps simultaneously. The concept phase had to run at the same time with promoting the project into social network service to find stories related with Tohoku 3.11. The main function of pre-production stage was to divine what kind elements would be necessary for the production. It was started by collecting accessible man power and fill it into production element full filled list that was referring to a standard film production. The decision to do outsourcing the raw mate-

rials and any footage occurred after the idea of producing documentary about Tohoku in 4K format was fixed.

From the concept that had already divined, it was really clear that the team would be divided into two elements, in-house production unit and crowd source unit. And for that purpose, the pre-production steps needed to decide which elements were given to the crowd source. The answer to that question was actually simple. First, after collecting all the needs of production elements, it was discovered that the production needed people who could be a contributors for the documentary content. There were difficulties for the in-house production unit to produce their own video shooting that time. So actually, the first point was to divine which one could really work and which one couldn't on the production. Second, in-house production unit had to take the management position in order to make the communication easier. Since this was the first iteration, the workflow was not yet settled and really new, production experiment with collaborating with crowd sourced unit was also quite challenging since they needed a lot of trusty between each element. That was why, crowd source was used (Fig. 4.1)

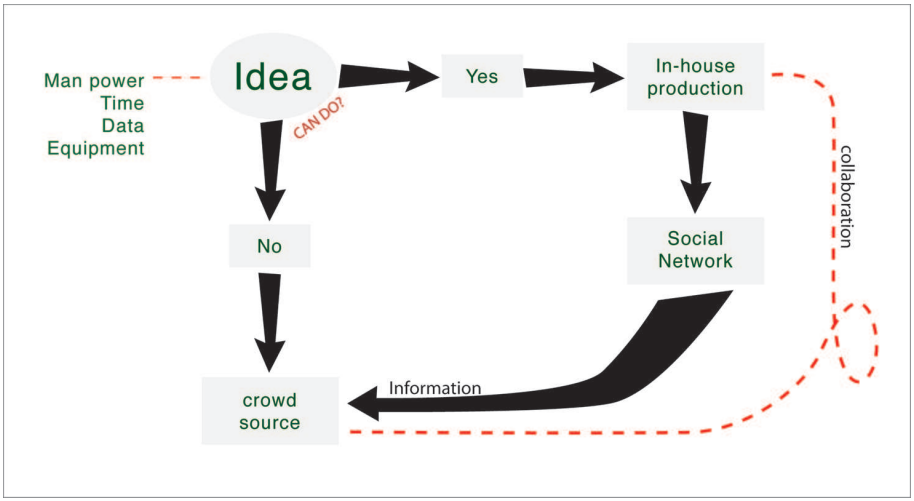

Figure 4.1: dividing work for in-house production unit and crowd souce.

The most important foundation of this production was to built the communication system between every element that was not able to meet each other so often for discussion. The workflow of the pre-production stage was describes on the figure below. (Fig. 4.2)

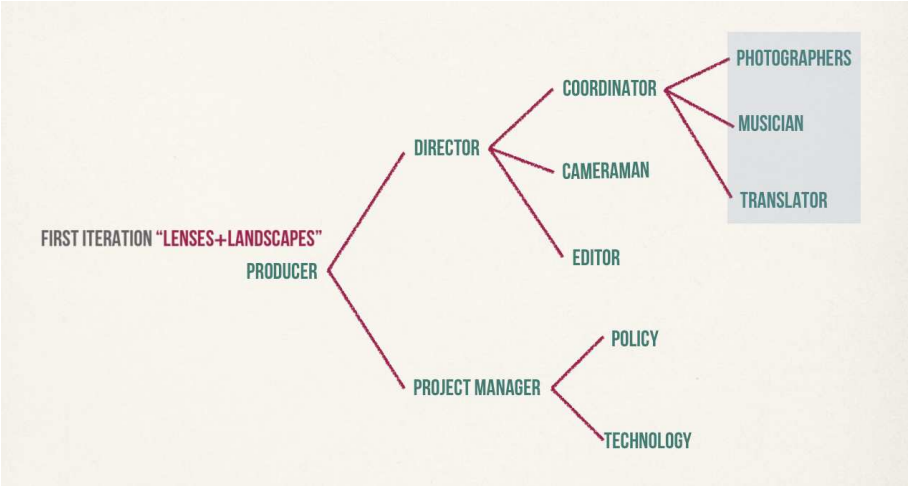

Figure 4.2: Workflow concept from the first Growing Documentary iteration.

In-house production unit, was divided into two groups; paper works group, led by a project leader which had also the role as a project manager, and a field group which was led by the director. Not like any other standard production in which production manager has usually to be always with director, in this production both roles work independently and collaborate in the end of the production process as a partner.

On the growing documentary system for "lenses+landscapes", the project leader had to be responsible of managing:

1. The flow of information on the internet or any update news about Tohoku,
2. The cloud server for data transfer,
3. The technology to be used for editing, rendering and sharing platform,
4. The policy and any contract for the third party,
5. The promoting the project through ICT. [34]

Meanwhile, Director had also role of managing as stated below:

1. To managed the coordinators which was connected directly with the crowd-source production unit; photographers, translators, audio/ music
2. To work together with editor on the film editing phase [39] to do director's cut.[37] and will also considering the editor's cut [38] as an alternative.

3. To direct cameraman for the interviews and keeping the story on the track as the main concept.

In order to make the collaboration worked between each elements, stepping design needed to made. This was actually a "to do list" for the first stage, so every production unit understood and worked on the same line.

Design

a. To form an in-house production unit to be involved in pre-production stage.

b. To find first person from Tohoku 3.11 who documenting what happen in Tohoku in photos with 4K size format and this person has to have a good story.

c. To share the needs of production crew via social network to work remotely.

d. To create a could server to receive the data.

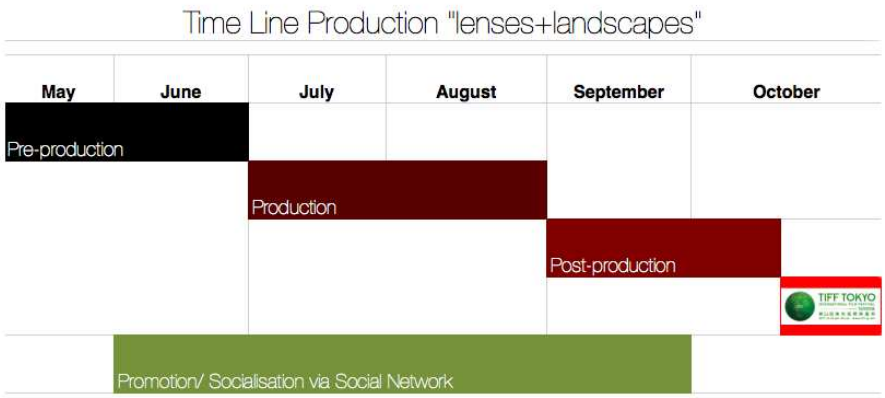

Figure 4.3: Projection of the time line production.

To keep the work on time and on schedule, timeline was absolutely needed. The pre-production started on May 2011, was designed to be a concept-ing phase. July was the production. Along the way with the production, September was allocated for editing process, and October was the deadline. It was a very tight schedule. But with the crowd source unit, the production was projected to be faster and efficient.(Fig. 4.3) Each point was detailed on the workflow below:

Workflow

a. Pre: In-House unit make the concept and research,

b. Pre: Share the concept to social network and to found a collaborators,

c. Pre: Get photographers from social network feedback,

d. Prod: Shoot interview by in-house crew, using a standard production,

e. Prod: Receive data via cloud server,

f. Post: Combine data and editing in-house using Adobe creative suit,

g. Post: Share the content to crowd source for musician and translator,

h. Post: Finalize it by rendering on Jpeg2000 codec,

i. Showcase.

4.1.1 Filling the production unit

Human is the best asset. - Peter Drucker

The next step of the stage was to put people inside the production element using mutual friend that was interested in to be involved to work on the project. Member from KMD - Power of Motion Picture Project became the most highly recommended team to be, because they were the most contactable group with good communication skills and easy to be trained. Lenses+lenses was the first iteration of the growing documentary project, that was why for the test drive, people who had cooperative work ethic were very important.

To complete the production unit on the crowd source group, promotion via social network became a significant way to get people informed about the project and tried to get them get involved to the project. In lenses+landscapes production, director and project leader were the highest position to make decision of choosing would be the talent. They were in-charge of making the mood of the lenses+landscapes story based on grand design of the growing documentary.

As from the previous table (Fig. 4.2), there were empty positions that need to be filled by talent from the crowd-source. They were photographer, translator and musician.

Photographer became the first priority, since finding photographer meant enhancing probability of problem solving for producing 4K visual that were needed for production. Translator was the second most wanted person, because the content and the final film was designed to be multi-lingual. Last but not least, musician. Music is to enrich the audio of the film and it is always be a complimentary element on film and bring the mood and emotion to the audience.[42]

Photographer

For lenses+landscapes production, there were many photographers that applied and listed as candidates. To eliminate the number of people, in-house team had already the checklists to be filled by the photographer.

One of the requirements in choosing photographers was to choose the one who has strong visual on their photos. Lenses+landscapes was looking photos with not only with Tohoku visualization but also photos with deep story and right angle. The presentation of each photo that the photographers had, was the consideration. As a result there were three photographers who were selected:

1. Mori Kensuke.

   A Japanese student and amateur photographer. He had the strongest visual since he recorded the earthquake and tsunami from the beginning, and captured all the situation in his city, Natori shi, Miyagi. Mori Kensuke was the local teenager that had a strong message since he was the witness of the tragedy by his own eyes and lost many things, but still had the motivation to move on and brought message of positive mind with him even in his hardest time.

2. Max Hodges.

   An American professional photographer that went to several places in Miyagi prefecture. His photos captured many stories by exposing the daily life objects in a beautiful and polite manner. The audience were expected to have interpretation to the visual that he produced.

   Max Hodges went from his curiosity but ended up as a news blog-photographer who captured every moment on the devastated area and updated it as an info for his reader.[16] Then he moved his attention to photo essay about Fukushima after the nuclear plant melted down.[15] He also keep contributing photos for press, such as The New York Times.[31]

3. Nakamura Yukoh.

   A Japanese illustrator whom also worked in photo art. He was originally from Iwate prefecture and had documented the area that was damaged by the earthquake and tsunami continuously. Since he is an artist, he gave another point of view of looking the problem. His positive way of thinking and his humbleness had contributed a heavy message for people who listen to it.

   Nakamura Yukoh made an artwork on the area before 3.11 earthquake and tsunami and this also enrich his statement and story that was needed to build a strong narrative on lenses+landscapes.

Story

The documentary was supposed to be "informing" not selling sadness or only the destruction. For this, story behind the photos became very important. Lenses+landscapes aimed to tell the audience about what happened on the day of 3.11 Tohoku earthquake and tsunami from the first point of view. By showing the photos the photographers wanted to sent messages for the audience.

To get the story on verbal, lenses+landscapes production decided to use interview, and video shoot taken by in-house production unit led by the director. Therefore the director had to be very careful on determining the question in the interview. Here, lenses+landscapes had to use standard film production flow.

Communication and legal work

As an iteration of the growing documentary, lenses+landscapes film production needed to deal with a large framework production by working with many crowd sources people who worked as another group of production unit. Growing documentary had a different procedure in term of working with this production unit. In side the production, they have right to get involve building the story and working as the main production unit as long as they can keep the communication between every element.

In side this framework, communication between in-House production unit and crowd source production unit is very important. That is why the coordinators have a big role, from maintaining the communication, assisting the director, and even doing a lobby if necessary.

Another big factor for the production of growing documentary is to ensure that all the datas that the production would received are certificated as a public resource on the credit of the producers. To accomplish that, everyone who get involved to the production, specially people on crowd source that giving their art work (photographer, translator and musician), has to sign a contract regarding to this matter.

4.2 Production and data management

One of the unique point of producing film in growing documentary methods was video shooting became a secondary element. All the important and main footages were supposed to come from crowd source, and the secondary footage needed to be supported by the main production team or in this case in-house production unit.

This secondary element was formed as an interview or any B-roll related to the topic. In lenses+landscapes, the director made a small production assisted by cameraman to catch the interview from photographers. This production had to travel to Tokyo and all the way to Miyagi and Iwate to do an interview.

On the other hand to support input data from the crowd source as the primary sources, via KMD 4K Tele-collaboration, NTT - Network Innovation Laboratories joined as main sponsor by accommodating the network facility. Special server using AjaXplorer on the name of Power of Motion Picture was served plus the folder was already ready to use for all the photographers to upload their photos. (Fig. 4.4)

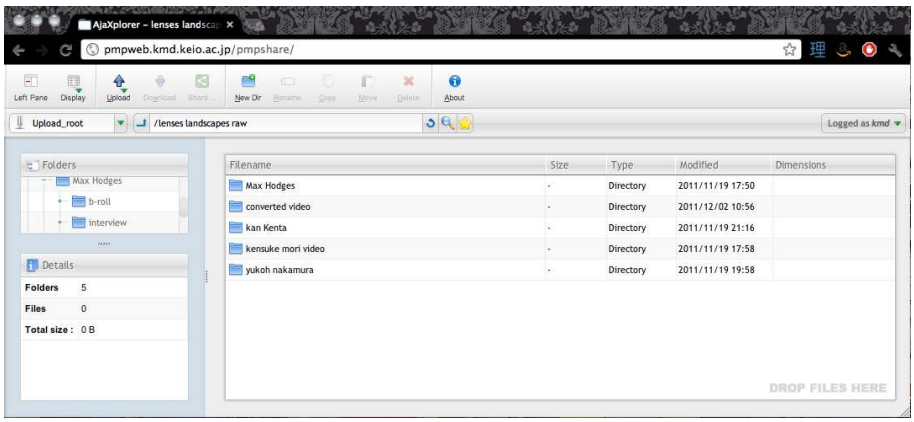

Figure 4.4: PMP cloud server.

4.2.1 The PMP cloud server

Cloud server was a substantial element on lenses+landscapes production. Not only because it was able to transfer up to 2Gb data but also the operator could manage the data and control the user by setting up the visibility and password for the file folders. This made the work easier, because the other production unit did not have to wait for post or any other reason to receive the data.

Inside the cloud server, the editor had already set the folder with names and dates per folder to make the file management easier to do. Since the crowd source work with "limited" communication distance, these folders had to be able to communicate with each production crew by having correct folder's name and metadata information.

With AjaXplorer as the cloud bridge, the editor and the director were expected to be able to work together, even though they were in two different places. Moreover AjaXplorer had small preview window to open .Jpeg file and .mov video file.(Fig. 4.5), (Fig4.6) It meant that the director and the editor were able work in two different time and just gave notes containing the desired name of file or folder.

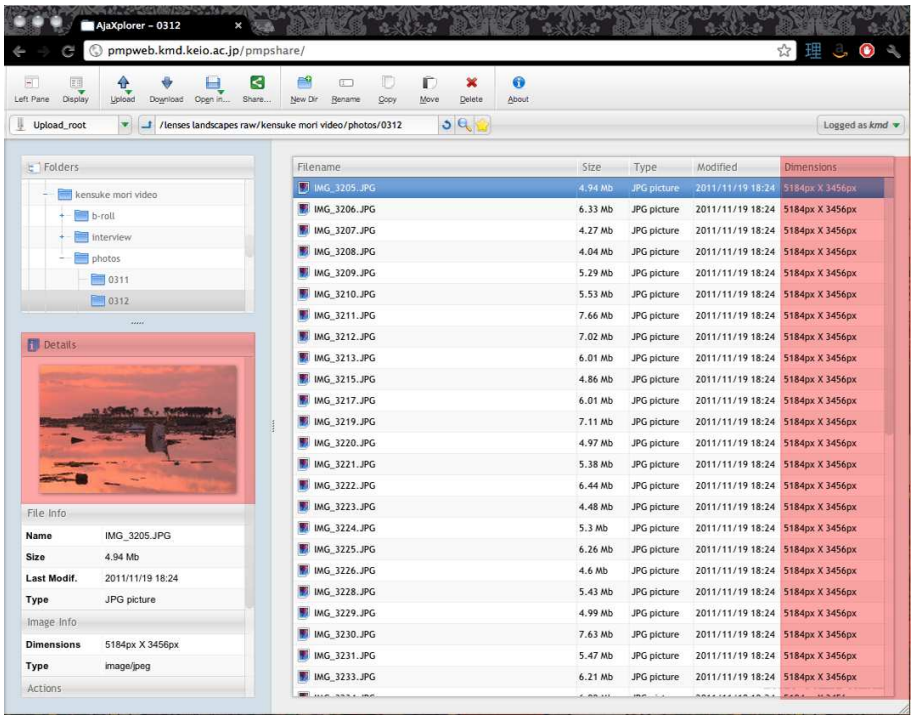

Figure 4.5: PMP cloud server with .Jpeg preview.

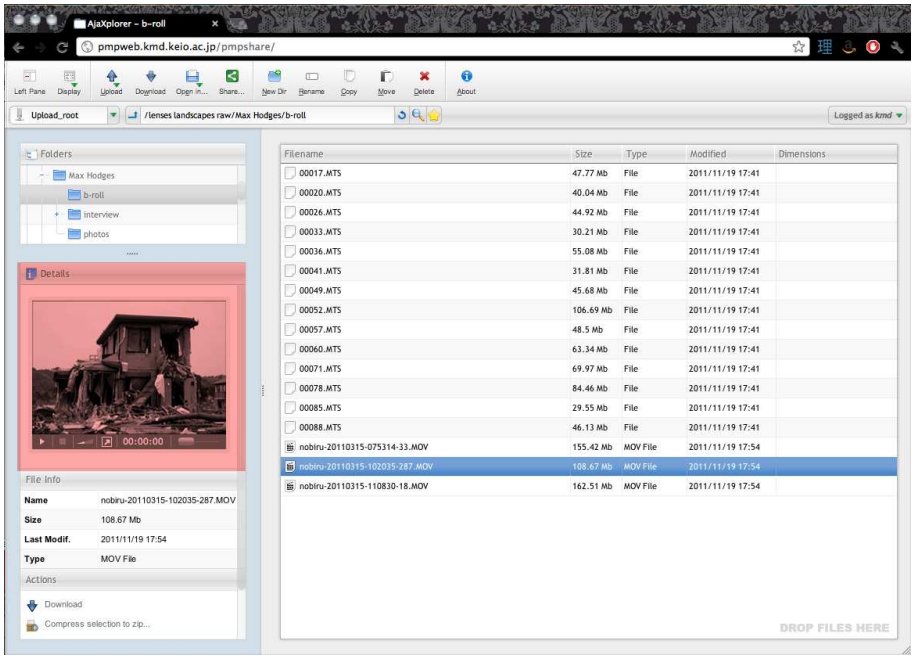

Figure 4.6: PMP cloud server with .mov preview

Unfortunately, this server explorer was not provided with the ability to open the preview window for another file besides Jpeg and mov.

Max Hodges used real professional camera to take the photos. His picture had 5000mpx dimension and had already retouched as an art work. To keep it as it was, he used TIFF formatting that was not able to be read by AjaXplorer server system for their preview window. (Fig. 4.7) TIFF is Tagged Image File, file format for storing images that popular in publishing industry. TIFF files are larger than Jpeg files, and doesn't get any compression like Jpeg files. They can be compressed or uncompressed, but the compression scheme is lossless, meaning that although the file gets a little smaller, no information is lost.[1] Because of this format, the AjaXplorer might not have the compression to make the preview of this type of format.

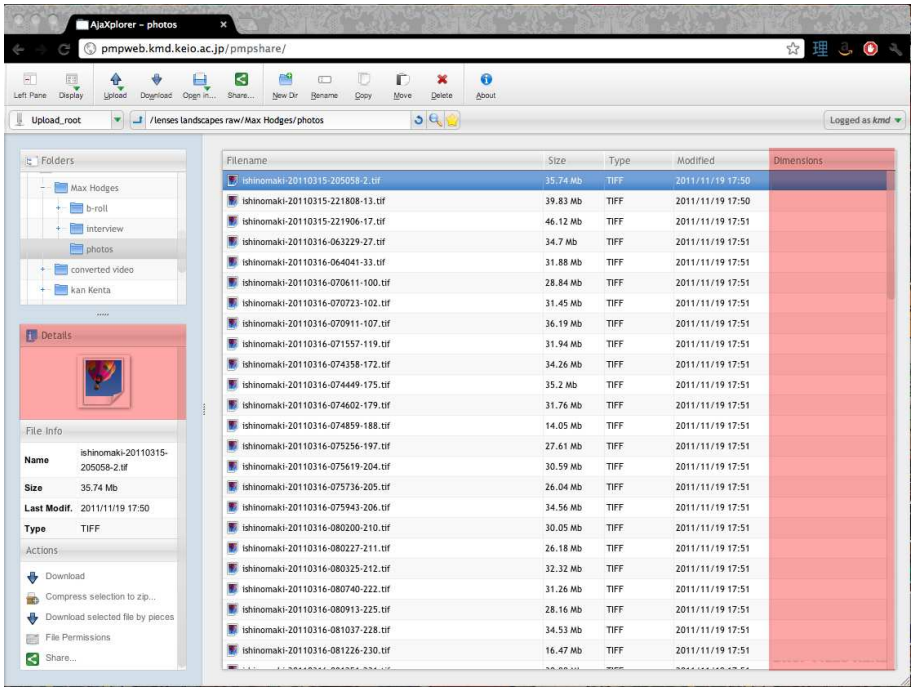

Figure 4.7: AjaXplorer was not able to make preview for .TIF.

This also happened to video files that produced as .MTS which was a common format for specifics semi-professional video camera, but not a common used by any user because it is a new format and needed a specifics codec to read the format. (Fig. 4.8) Because of this reason, director and editor has to download all the files, and make preview of all the files and eliminated some un-necessary files.

4.2.2 Building a story

A documentary could be formed by using a narrative or non-narative story telling. However, "lenses+landscapes", as an informative documentary film that intended to deliver the first growing documentary message about Tohoku 3.11 earthquake and tsunami, should be structured in narrative format.

To built the story line for "lenses+landscapes" with all the RAW material was a time consuming stage. Language was the first barrier. "Lenses+landscapes" interviewees used two languages, Japanese and English, meanwhile the editor only understood English. Translator was really substantial and demanding. However, there were some other difficult situations that also needed to be solved for example how to deal with thousands photos and constructed into be a puzzle of narration.

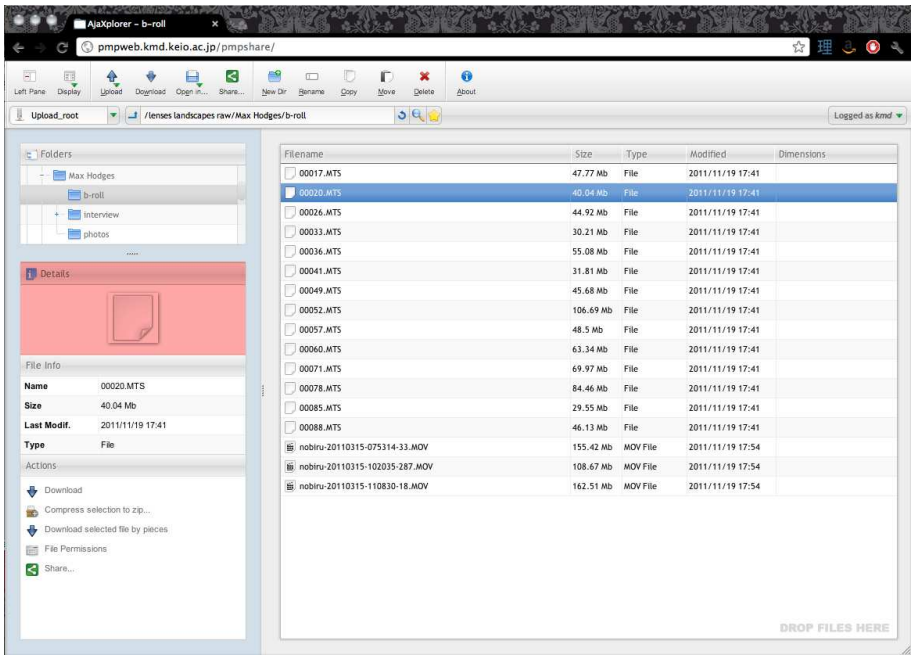

Figure 4.8: PMP cloud server.

This section was the bridge between production and post-production, because at this point, the editor had taken a role to built a story with the director. Both the director and the editor had to do elimination from the RAW material and took the best visual to be inserted to the editing machine.

For this level, in-house production unit made a simple workflow to solve the difficulties, specially the language barrier.

a. Transcription

   Transcription was very important. Not only to be used as translation script but was also used as a guideline for editor while grouping another RAW material.

b. Translation

   Language was the real barrier. After the transcription had been written, translation was the next step to be done.

c. First cut

   From the photographers' interview video, there were some answers that needed to be cut and eliminated because those were not related to the desired narrative. This process contributed to the offline editing process using Adobe Premiere CS5.

d. Grouping

   Grouping means making classification of the RAW material based on the place and the sequences. Interview video became a guideline to classify all the RAE material grouping.

Based on result of the workflow, the editor continued the offline editing and tried to make an editor cut by sketched the logic of the story according to the time sequence of the event of 3.11 and continuing the story on the post production stage.

4.3 Post-production

Post production was the stage where all the contain; photos, videos, music were combined to be the one art work. The editor had a very important role to make decision of which raw material was used to fill on the timeline.
In lenses+landscapes, there are one more task.

4.3.1 Editing

As the Growing Documentary is a social platform for individual and community cinematic expression, 4K format was chosen as the output resolution. Although the photographers did not have the tools to film in 4K, their high resolution raw still images were designed to be combined with multi-framed HD video. The edited RAW material had rendered to be a very high resolution movie clip through the use of community resources which hopefully helped in the path of recovery and reconciliation after the disaster.

The editing process of lenses+landscapes in 4K format was really tricky. Not only because of the different type of the file size but also because it contained mostly photographs. There were only two types videos on the folders; videos of three interviewees and some B-roll which was taken in HD format, 4 times smaller than how it was expected. Editing might be able to be done by any editor, but to edit a 4K format film with this kind of material needed a little bit sense of composition and broad insight, because it was not only a slide show of photo parade.

To do so, the editor had to understand the spacing and the correct transition tools. Here the director also gave a suggestion to use ken burns effect to make the photos looked more dynamic since it gaves a motion, such as slowly zooming in on subjects of interest and panning from one subject to another.[25] Ken burns effect was actually a common and most used effect on documentary film that using photograph as the visual resource.[41]

Editing workflow
Editing workflow that been used for this editing was nearly the same workflow with the previous 4K Narrative action research used by Fabien Delmotte.[6]

a. Windows 64 Bits Workstation

   The workstation was built with windows 7 professional and 64 Bits operating system.

The processor was Intel Xeon CPU W5590 at 3.33GHz (2 processors) and the installed memory (RAM) was 24.0Gb with NVIDIA Quadro FX 5800 graphic card.

b. Memory and Backup

As Fabian said on his research, the storage is a most-have in a 4K post production. The workstation supported by ARECA (X86-64-SCSIPORT) SATA RAID Host Adapter (RAID6-ENGINE Inside), Inter(R) ICH8R/ICH9R/ICH10R/DO SATA RAID controller, and LSI Adapter, SAS 3000 series, 8-port with 1068E.

c. Adobe Master Collection for offline and online editing

Offline editing is part of editing process, it used to choose the order of the photos and matched it to the story line that already had decided on the previous phase. This step was different from the previous research, because the production was not engaged with 4K RAW material from 4K camera. Photos that were being used as RAW material had only 2Mb to 50Mb of storage while real 4K raw sequences from 4K camera require 1.2Gb of storage for every one second material. That is why, lenses+landscapes editing was all covered by only using Adobe Premiere CS5.(Fig. 4.9)

The good thing from this editing process was almost all the photos already on a good color because all the photographers had some experience on dealing with photograph. And because lenses+landscapes was designed to be "all from the photographers" that was why editor did not use any heavy coloring tools.

d. 4K Monitor - Output verification

Astro 4K monitor (ASTRO DM-3400 3840x2160) has been used for checking the online editing and also the final out put before and after rendering because the color balance was close to the projector that was being used to play 4k content.

e. Rendering system

Since the final film would be a very large format, it was really important to make it scalable. With many different codecs the rendering system became easier in order to get any format from HD to 2K.

f. 4K output - Linux-based computer with Jpeg2000 codec.

Like any other 4K film, the final step before being able to be watched, the final process would be Jpeg2000 codec rendering.

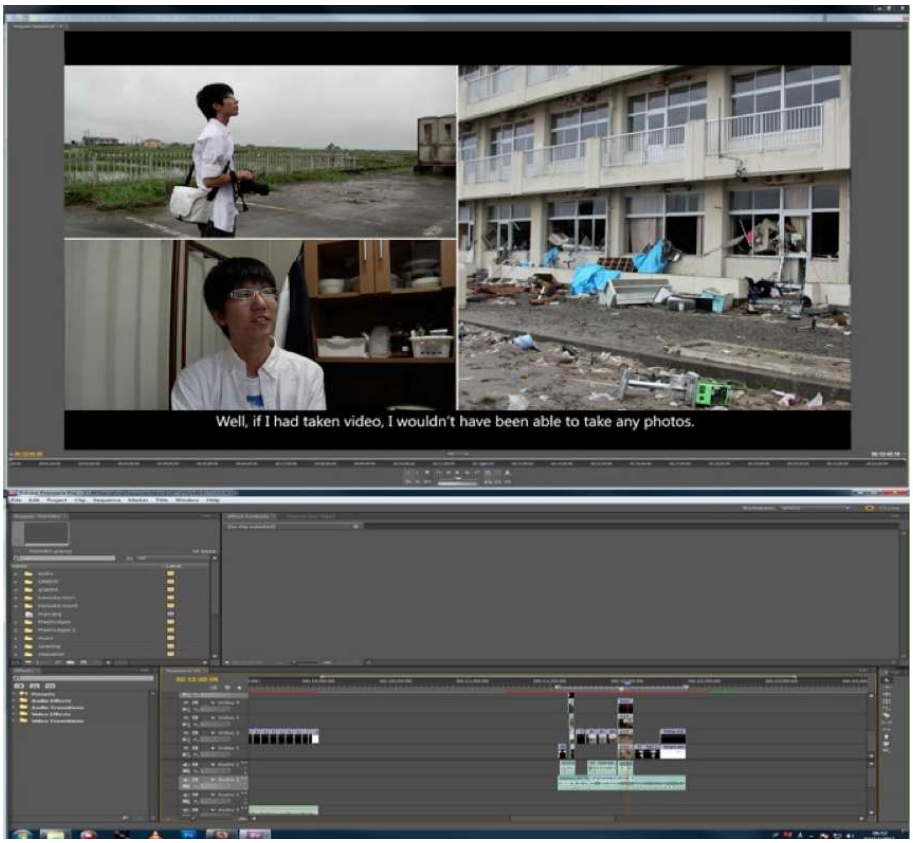

Figure 4.9: Editing process using Adobe Premiere Pro CS5

Layout-ing

Layout on cinematic production is also a significant way to increase the attention of the audience. With a good layout, audience will have an entertainment for their eyes rather than just passive position of a video or ken burns still photos. Using the effect of layout, lenses+landscape became more varied. Imagine that we have 4K space, but we only have HD raw footage.(Fig. 4.10) If we only put the HD raw footage on the center of the 4K space the whole time, it would be something too monotonous to be watched.

Adapting a knowledge from graphic design, Tomothy Samara on his book says "Without a clear, balanced layout, even the most interesting information is likely to be ignored. But balance doesn't have to mean boring, as cutting-edge designers are showing with exciting new deconstructionist looks."[29] Even though he was referring to advertisements, books, posters, and invitations, it doesn't mean that cinematic design is not allowed to implement the same layout. By implementing this idea, lenses+landscapes would have a unique and fresh, yet effective in space usage and also user-friendly.

Figure 4.10: HD video on 4K space, center position.

Figure 4.11: Alternative layout 1.

First layout that had been tried to be used on the first experiment was to divided 4K space into four HD space. This layout could help giving four different visuals for one story. As an example on Mori kensuke's part, after dividing into four (Fig. 4.11), we could get a visual of the city lanscapes (1), himself as a guide on the city (2), Mori kensuke's interview (3) and also information about him (4).

Second alternative that had been used was to divided the 4K space into unbalanced space.(Fig. 4.12) This layout was used not only for esthetic, but also to keep the usage of his high quality photos (2) during his interview (1). Another option was that divided it into balanced two sides but with different tone of color, like Max Hodges interview, using black and white and also color video. (Fig. 4.13)

Figure 4.12: Alternative layout 2.

Figure 4.13: Alternative layout 3.

Third alternative layout that had also been used was to split it into three spaces (Fig. 4.14), where the first two were used HD raw footage to show Mori kensuke's activity (1) and interview (2). Then the remaining space were used for his high quality photo.

Figure 4.14: Alternative layout 4.

Another case for spliting into three spaces was interview with Nakamura Yukoh. In this part, his interview was related with the HD B-roll (1,2,3), therefore to slip it into three spaces would be effective for the story telling. (Fig. 4.15)

Figure 4.15: Alternative layout 5.

Transition

On the cinematic production work, time and sequence are two element that also need to be played. Time and sequence are the significant differentiation from still image design. If the still image design only needs good layout, cinematic production needs transition to combine two or more sequence to be related from one to another in term of integrating it to be one cinematic work, or film.

lenses+landscapes used more than 100 photos and videos to be united in to 10 minutes documentary film. Within 10 minutes, the photo slide used ken burns for the transition. Taking the same idea with layout-ing, if all the transitions were using ken burns effect, the audience would be too tired. That was why, alternative transitions were used.

"Pushed slide" was used at the beginning part of lenses+landscapes. The visual were using a condition of damaged road caused by the earthquake and the sea level before tsunami meanwhile the audio was Mori Kensuke's voice describing both photos. (Fig. 4.16) "Pushed slide" transition, expected to create an illusion of sequential events that happened on March 11 in front of Mori Kensuke's eyes.

Figure 4.16: Alternative animated line 1.

Another alternative transition was to play with the space and line animation. This was used for transition between Mori kensuke and Max Hodges's inteview. (Fig. 4.17) Using this transition was giving an impression of changing the story teller and also "wake up call" for audience eyes. The line is part of the aestethic point and playfulness among so many still pictures that being showed inside the film.

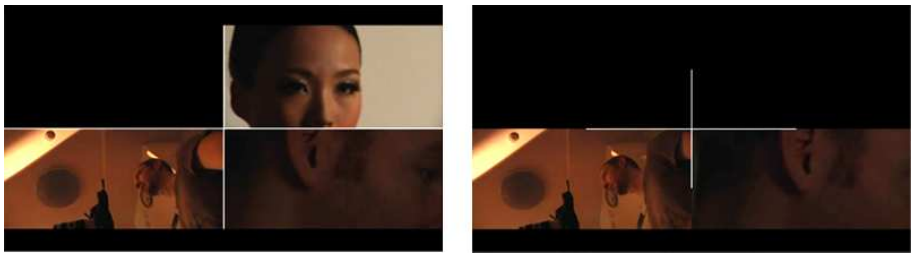

Figure 4.17: Alternative transition 2 .

Growing documentary since the beginning tried to facilitate collaborative work to produce high quality documentary film, and that was the standard production of lenses+landscapes. Because of that on behalf of keeping the 4K format, after the editing process ended, the next step was to render the film into .TIFF file and converted it into 4K format film using Jpeg2000 codec (this rendering process was supported by KMD 4K Tele-collaboration).

4.4 "lenses+landscapes": The showcase

Every filmmaker, wants their film to be shown to other people, and so was the people behind the growing documentary production. This dream came true after lenses+landscapes got a big chance to do a showcase in CineGrid at Tokyo International film festival 2011. In this event, there were many guests from different background, from academic background, researcher, student, film maker, etc. This would be a big step for the project, because since then, lenses+landscape already had already been performned in several events in 4K playback and even HD.

For growing documentary, having a public showcase means publicity. Publicity or promotion is very important, because to make the documentary keep growing collaborators or any volunteers are needed. Every small discussion or social network post are chance to promote the project.

Figure 4.18: "lenses+landscapes" movie poster.

Following are lists of showcase of growing documentary performed in several places.

1. CineGrid @ TIFF 2011, October
   Previewed in 4K format and was shared to Tohoku University via NTT network.

2. Nikkei Youth Network 2011 event, October
   Previewed in HD for a small convention room.

3. CineGrid 2011 - San Diego, November
   Previewed in 4K format. Was played remotely in America from Japan using CineGrid network.

4. KMD Plennary meeting, February
   Previewed in 4K format.

5. vimeo.com, Lenses+landscapes, was converted into HD 1080i format and uploaded to vimeo.com[24]. lenses+landscape was uploaded three times; two files has the same content but one of it was downloadable and another one has spanish translation. From vimeo, lenses+landscapes got more that 2000 playback and still raising up.

Chapter 5

Collaboration work and the next Iteration

Growing documentary wants to be a facilitator which providing an alternative mechanism of collaborative and scalable film production with uniqueness that the story of each film grows in many ways. The grow itself depends on the production teams and the response from the audience.

After the Tokyo International Film Festival 2011, CineGrid and the researcher from University of California San Diego (UCSD) gave a call to make a collaboration work for the next iteration of growing documentary. They offered to facilitate of the technology usage for growing documentary, since growing documentary has the same vision as them: that is collaborative work production. CineGrid and UCSD are currently working on their own research about collaboration, sharing and make distance connection device called SAGE. CineGrid and UCSD thought that growing documentary is a real implementation project which reflecting their research. So far their research was focusing on the technical usage, but growing documentary is use to make this technology become larger into an art, film production and community sector.

By having collaboration makes the growing documentary really meaningful as a proof of real response from audience. Above that, growing documentary could also experience some high-end technologies for the research. With a professional people on technology field, this collaboration aims to experiment another workflow for growing documentary production. Collaboration work would be a splendid process for trying out any workflow and technology to support the production before applying it to the real user which is the crowd-sourced people who would come from any background and might never be involved on this kind of production before.

This production is the second iteration of growing documentary. Together with students in UCSD, this production was trying out the communication system, workflow and data distribution using many kinds of technology such as 4K-Telecolaboration, Google site, PIX data management, SAGE and the PMP cloud server. As the introduction says that this production is mostly focusing on the technology usage and distance collaboration work, however it doesn't mean that this production forget about the main mission of growing documentary which is to expose a humanity and social problem.

Topic of this project is inspired by lenses+landscapes, how people in Tohoku are actually now being displaced. This brings displacement issue as the topic. Displacement are actually experienced by many people, where they might have to move to another place or another country that has many differences from their origin. Since the production team is separated into two countries, they could see the problem with immigrants who live in California and also foreigners live in Japan. There are may people move to another place and feel confused of how they could integrate with their new place. Some of these people also have to deal with difficult situation by themselves. The sights of this documentary are to reveal the problem when people have to be displaced and try to motivate the audience to find a positive point of that matter.

In the beginning this team wanted to make some direct relation to "lenses+landscapes" but they had to cancel this idea. They thought that this production was mainly about testing the collaboration and technology so they changed the topic into the current topic. Student from UCSD was unsure if they could cover Tohoku problem if they didn't have the insight, but this team is still hoping that someday their documentary will grow and reconnect to Tohoku theme. It will be depend on the next production team.

Furthermore, on the communication and related promotion, growing documentary is now more ready with the technology and since growing documentary is now equipped with facebook page, so it is easier to share any information to the audience, which is prospective collaborator.(Fig. 5.1) Until today, there're already 91 facebook user already connected. Every activity on growing documentary page will be known by those users. So far, this page is still become a trial and to do user test response in case of the project's promotion, information and many more.

Figure 5.1: Growing Documentary facebook page.

5.1 The growing of Tohoku story

The first and current primal motivation of growing documentary is to keep documenting the reconstruction of Tohoku area after 3.11 earthquake and tsunami. There were many media cut down their main program to report about Tohoku during the tragedy, but the number of media preaching this issue is very small, moreover for common people. From interviewed with Liz Maly, an assistant researcher for International Recovery Platform (IRP) [22] who was also involved in volunteering and documenting recovery progress of Tohoku, she said that documenting every single things from the recovery process was very important for the future learning and research. This recovery process was priceless; Tohoku had to start all over from the beginning after the disaster.

After showcases and more than 2000 plays via KMD 4K Narrative account on vimeo.com, there are so many feedbacks that lead us to the next documentary about Tohoku. Most of the feedback requested growing documentary to expose the improvement of the recovery and also volunteers role on recovery process. Some NPOs and volunteers had already connected to the project and gave many update about the recovery and volunteering activity. However, there are many difficulties that growing documentary had to manage the matters and mostly about scheduling and connectivity with in-House production unit.

5.1.1 Tohoku 2.0 production

Departed from huge motivation and supported by audienceIs feedback, growing documentary is currently producing the third iteration, which actually become the second iteration of Tohoku story. Learning from the first and the second iteration of growing documentary, Tohoku 2.0 tries to use combination of both workflow. Finding the best way to produce the documentary, Tohoku 2.0 production is currently being produced. But this time, the production is using JVC 4K camera as a production equipment. Since the equipment is quite new, so the production team needs to do some experiment in order to be able to work efficiently.(Fig. 5.2)

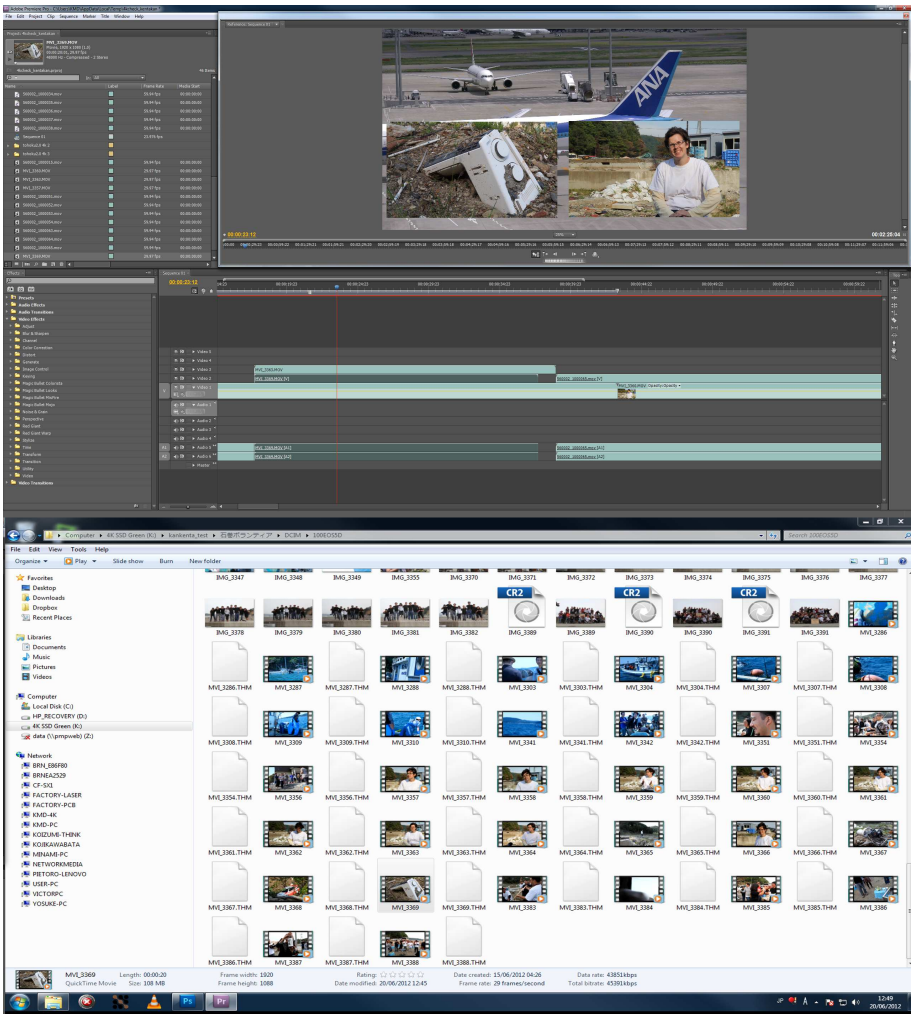

Figure 5.2: Experimental editing for JVC 4K camera footage result.

This iteration, is using many collaborators from different background. "Lenses+landscapes" will also "participate" on this iteration as a proof of the growing story. There are many people who make a contact the growing documentary management and also send their photos and videos. In order to get the best story, in-house production unit have to do so many meetings to interviews and get the red line of the story. Taking the first principal of growing documentary that each story has to have motivation message, not only selling the sadness, this phase take a little longer in process.

Eventually, the general ideas of "Tohoku 2.0" has been decided. Those ideas come from audience comments and input right after "lenses+landscapes" was screened. Audiences hope that the next iteration will be about volunteer and people's live nowadays, as it was explained before. In-house production unit, which now works like the management of growing documentary has also decided that this iteration will be more cinematical, means the final film will be closer to a professional documentary film and using numerous filming elements.

To simplify the description process, this section will directly expose the element of Tohoku 2.0 and shows that the growing documentary is actually growing. What makes the project unique is that how the story is related from one story to another. One story will lead another people to compose another related story and the grow of the story itself. Just like a participatory film, this iteration has similar basic idea.

Lenses+landscapes contains stories from the day of disaster and the effect that happened on the city and captured on the photograph. The photographers who became the story teller also gave their verbal message that was actually a story behind each photos. Tohoku 2.0 tries to continue the development of the story; what is happening now in the city, and how the photographers live, and their opinion about the reconstruction. The government already given their effort to do the reconstruction, however there are many things that need to be solved regarding to the effect of 3.11 earthquake and tsunami. Therefore, the volunteer activity has a significant role to this matter. Different from lenses+landscapes, where in the first stage it didn't have any guidance, Tohoku 2.0 receives many input and experience from the previous productions - before the production process was officially begun. From the data collective, information, and raw material received on the pre-production stage, in-house production unit is able to construct a storyline design as a guidance. (Fig. 5.3) Tohoku 2.0 will combine the continuity of

Figure 5.3: Story line design of Tohoku 2.0.

Tohoku after the earthquake and tsunami with stories behind the volunteering activity that give many changes and hopes for Tohoku. In-house production unit will also get involved in the producing of 4K formats raw material in order to make a different experience for the audience trough the final documentary and experiment mix production material with more diverse raw footage. Raw material will take some sequences from the previous documentary, lenses+landscapes. In this way, the audience would be able to compare what happened last year and how Tohoku is actually begin to reconstructed.

Chapter 6

Evaluation

This thesis aims to facilitate the user collaboration in documentary film production that can grow depending on the audience feedback and crowd sourcing base workflow. The research tries to bring innovative, creative ways of film production, by changing the common traditional workflow workflow. The research tries to bring innovative, creative ways of film production, by changing the common traditional workflow. The key points of this thesis are to get results from the production process and the feedback from the audience about the project.

Evaluation of the product of growing documentary was done through the film maker's and collaborators' observations. Data was also collected through online surveys to the audience (viewer of the films and also out-siders). This evaluation is necessary to properly assess the strengths and weakness of the production and the whole growing documentary package. Lessons learnt during each production and managing process are presented through the observation and reflection on each production.

After showcases and more than 2000 plays on vimeo.com, growing documentary got a lot of feedback that led to a collaboration work with University of California, San Diego and also the next documentary about Tohoku. This brought a new path for growing documentary and its development. But, growing documentary is still new and needs a lot of improvements to be settled as a big project with a sustainable workflow and technology.

6.1 Results and findings

There are two points that the researcher used to measure the effect of this research. By creating the grand design and making workflow platform of the production, it was believed that the filmmakers and contributors could work together continuously to produce a 4K Format - high quality documentary film in a short time and yet in an effective way. The other point was to see how growing documentary product could have a place in the audiences mind and be able to send a message to the audience about the chosen theme.

First the research will look into the course of production of the growing documentary. The production is the core of this thesis, as this will be used for measuring the effectiveness of the production. It will also be used to reflect on the next iteration and used as a case/comparative study for the next related researches. As Lenses+landscapes managed to become a strong foundation for growing documentarys development, the researcher believes the project was a success.

According to the researcher's observation, from the beginning of the production, the set up of the workflow during the pre-production phase went very well. Due to the work put in by the production team who had production background, the workflow and the communication between each production element was done to perfection. However due to language barrier, there was a small miscommunication with one of the collaborators. This proved the important role played by the coordinator. For the second iteration, the project manager's role; preparing all the contracts and cloud server, was no longer substantial. Indeed the work of project manager was still important to control the schedule and the paper work, but since the contract and cloud server were already provided on the first iteration, the work load of the production manager was minimal. In the future its supposed to be provided on the website, downloadable and have easier user interface so that production team's work load can be minimized. If the filmmaker team only has a small number of people, the growing documentary should be able to facilitate the production by giving a production manager online system option for dealing with the contract, could server for data transferring, and even the scheduling.

Going to the production phase, the team encountered problems with the technology aspect, where the contributor had difficulties engaging with the sharing platform. This

was not only due to the network problem, but the platform was also not user friendly. A platform and interface are needed to convey the idea and allow people to easily create or share content. The platform gives the contributors more room to improve their film production skills such as the style and content collaboration coordination. This would allow for more consistent quality across different iterations of the movie. The same opinion was also expressed by the contributors on the questionnaire. As the technology is still growing and people are getting used to it, it is important to focus on the streamline system to be implemented not only during the production stage, but during the contents accumulation stage. There has to be an easier way to collect contents from the viewers and involve them in the final process more.

In growing documentary concept, the size of the film was not a big concern. The documentary can be produced in any quality and size that they choose. However, the big scale quality size is preferable to provide a scalable film product and would be a content for the future research. The iteration for Tohoku project lenses+landscapes and tohoku2.0 were using 4K formats, because the filmmaker decided to use the highest format and thus getting good quality product result. The editing process had been done perfectly, with combined editing experience from the previous project that was also produced in 4K format and the lay-outing knowledge of the editor. The biggest challenge was the rendering process that took more than a day to produce 10 minutes 4k quality film. One thing that could be improved on production is to collaborate more than two PCs as a memory supply to push the ability of the rendering machine in the future productions.

Growing documentary is a project based on collaborative work and using cloud server to do data transferring. The cloud server is using AjaXplorer as the gate. As mentioned in the previous chapter, the difficulties of using AjaXplorer was the limitation of previewing .TIF and .MTS format files which was the common formats that have been used by the collaborators. Since the AjaXplorer did not support the preview, it was a challenge for the director and editor to do online picking. They had to download all the files to get the manual preview via their own computer. The concern about this stage was the storage that was needed to keep all those heavy datas/files for the editor to preview. In the next project it will be substantial if growing documentary has cloud gate that enables users to preview and give content review on the could. For example live preview for .TIF or .MTS file and also allow the users to give a comment or feedback to any files on the cloud server behind each files.

The viewers also gave their opinions regarding the quality of the film. As viewers, they might not understand the mission behind the film. But they do understand the message that the film brought to them. From the questionnaire responses to the question,Do you think the size and quality of the documentary film give you more impact?, the respondents who watched lenses+landscapes on big screen or projectors said that the quality of the visual is important because it delivers the detail of the image and make them feel more attracted to the film. They said it makes it more real, authentic, unique and brought more emotional impact to the audience. The audio also led them to their personal insight. For them being able to clearly see or hear what is going on in the film definitely contributed to the experience of watching the film. But there were also some contradicting answers saying that the quality is not critical, the most important is the content, the story telling and how the film is edited and sending the message sharply. Another point of view came from people who watched the film via social network or vimeo.com. As they were not be able to compare both experience, they said what they saw is actually good enough for them but strangely they also thought that the quality is something important.

For growing documentary, audience response is very important. Moreover if people from the audience are willing to join the growing documentary volunteer as a collaborator or story teller. For the next Iteration of growing documentary, The collaborator numbers are increasing. If Lenses+landscapes had seven people collaborating, currently there are more than 15 people were volunteering to be collaborators. The production has started, and it is already fixed that Tohoku 2.0 would be the theme and the content were received from the audience. It is proved that growing documentary has many potential to be developed. Indeed, with the crowd source base production, it is easier for the production team to gather the content and production crew to work with.

6.2 Audience's point of view

Your purpose is to make your audience see what you saw, hear what you heard, feel what you felt. Relevant detail, couched in concrete, colorful language, is the best way to recreate the incident as it happened and to picture it for the audience. - Dale Carnegie

The biggest factor to embrace the success of a film is the audience's response and how the message from the film could have an impact or give the audience something to think deeply about. There is a lot of feedback from the audience, and mostly are encouraging messages to the growing documentary to keep continuing the project.

As result of the questionnaire for the question about the impression of lenses+landscapes, audience mostly felt that they were satisfied with the film. They appreciate the fact that it is not dramatic and tries to show the situation in an emotionally detached manner, that at the same time allows the viewer to respond with their own feelings. Some of the audience could take the deep message and learnt how Japan, even though in a difficult situation, they can hold on and never give up re-building their country again. The Director of lenses+landscapes, Janak Bhimani, gave his professional opinion, as a first attempt, lenses +landscapes was successful because it planted the seed for the growing documentary.

Another concern from the audience is how growing documentary in the future will become a bigger project and the importance of finding a way to "control" who can change the contents of the documentary in order to control the quality of the documentary. It still needs much more researches and developments about the policy and technology to be implemented. As a plan and also according to the survey, growing documentary needs a web platform, one portal to collect all the data and to be a media to gather all the crowd source and any collaborators who are willing to join the project. On the portal, there should be a rating button to measure the quality and to check how popular the film within the market. All these will be very important since the skill of the filmmakers are very diverse. If those point are ready, the next thing that will be needed in order to keep the growing documentary keep growing is to have more promotion or a campaign to inform the audience, potential collaborators and sponsors. The audiences has also mentioned that growing documentary is expected to be more interactive and probably have mixed visual genres and styles. For example, mixing fiction and non fiction, play-

ing with visuals, colors, lightings, create interesting angles. The more films, the more audiences, the more collaborators that the growing documentary have the more possible to make a big screen to reward the best film among all the productions. This will be a big plan for the future to motivate people to contribute.

Simplifying the whole result, producing a documentary film with a mixed production element is absolutely possible. With combining this kind of production with the power of participatory element and magnificent management and promotional, a growing documentary - documentary film is certainly potential to do. One concern from the audience is that if the standard of the production was 4K format, as the previous research about integrating a professional technology into an innovative artwork with a 4K digital cinema, 4K quality is still unreachable by a standard equipment that most people and audience have. But as an investment, growing documentary keeps trying to produce a 4K formats documentary film, as a potential learning resource in the future (regarding to the content or even the production workflow). However, Growing Documentary is not giving any restriction to the filmmaker for doing the production using any quality scale for their film.

Chapter 7

Conclusion and future work

7.1 Conclusion

Documentary film is one medium to educate and to inform the audience about a certain case study. As documentary film is wrapped as not only with the information but also has entertainment side, audience will be able to absorb the content easily. That is why, growing documentary used in this research is to insert a deeper message for the audience to feel the insight of the case.

This thesis tries to contribute to facilitating the collaboration works to produce high quality documentary film that the story could be grown or extended. With the good coordination of the production unit and all feedbacks from the audience, will definitely help growing documentary to gets it merit. In the future, researcher and readers are expected to understand the possibilities and are able to implement the same workflow that has already been facilitated by the growing documentary. By understanding growing documentary concept, reader can be motivated to get involved to the project, even though just by passing the information to another people via social network. Intellectually, the reader can see the novelty of growing documentary by understanding the aim and reason behind the establishment of the project. Emotionally, by having the same vision, audience and filmmaker could be an agent of change by helping expose any kind of social issues and send that message via documentary film. Trough the research and getting involve with the production, readers will be able to understand more about growing documentary, and how each documentary is actually have big potential to grow.

During each production of growing documentary, it is clear that this product is a potential media to send message to other people in a smart way. It means that, not only audience who watch the documentary, but also the film maker who become familiar with the topic, the equipment, technology and also networking which makes the crowdsourced element has possible to be involved. This production could eliminate the effort

of each production element but still could produce a high quality production above an average student 's project film quality

Until this stage, it can be concluded as it was stated in the early statement that the grand design of growing documentary is actually really potential to be developed.

7.2 Future works

Growing documentary is a new method of producing a documentary film. There were so many questions asked, but the answers might not yet be answered in this study.

Future works for growing documentary will be concentrating on the utilizing on more open source technology to support the production of growing documentary. Advanced technology usage is the most recommended element to be distributed in growing documentary infrastructure. The advanced sharing platform is necessary to support the next collaboration work with another collaborator and make the production work of growing documentary become more manageable. To achieve the goal of this study, the platform, data management and user interface would be necessary. However, if the technology is added inside the production, it means that the production workflow will also need to be adapted.

Another important thing is to build a communication platform to raise many more potential volunteers, collaborators, and contributors to be a crowd source element of the production. By having a stronger platform, growing documentary will be easier to be promoted. With a good promotion and of course the quality control of each film content, growing documentary will be able to have a good branding and position in the market. And if so, the audience will have a trust and desire to join to be a collaborator or contributor. In the future, if growing documentary can keep the vision and mission to deliver a humanity message, it is believed that it will change people's perception about online volunteer that currently not so familiar in the audiences ear.

The uniqueness of crowd sourcing base - high quality film production will certainly be one of the reasons for growing documentary platform to be growing and used for the larger industry.

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