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Independent Fictional Movie and Customer
Based Production
Assessment of Two Approaches

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<p>The purpose of this Thesis was to develop a professional workflow for a video production and to deliver a customer a script which could be used as a base for a professional and coherent educational video production that would showcase the advantages of an online platform through a real life case. The goal for the customer was to make the online platform more known to possible end users and to present the abilities of the platform in both student and business environment. The project was developed in collaboration with the customer, company maintaining the online platform and the University that was using the platform in their own case.</p> <p>During the project the workflow for a professional video production was developed through an independent short film production. The pre-production, production and post production phases offered valuable practical information and skills for the foundations of a workflow for a single person.</p> <p>In the Thesis the customer's need for the production and the desired style for the production were solved. In the beginning of the project also the roles of the different parties involved and their workflow during the project were investigated. The University's own project was found out to be suitable for documentation as a real life example almost unaltered. However, the project of the University was a long-lasting one and only part of the project was decided to be documentary style and the conclusion would be dramatized.</p> <p>As a result of the Thesis, a script that could be used to produce a professional educational video with narrative was written. Professional video production is at its best when it is done as a group work and different tasks are distributed to people that have the required special expertise. One man operation always suffers from lower quality to some degree because everyone is good at something but nobody is good at everything.</p>	
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<p>Insinöörityön tavoite oli kehittää ammattimainen työnkulku videotuotantoon ja toimittaa asiakkaalle käsikirjoitus, jonka pohjalta voidaan tuottaa ammattimainen ja selkeän jäsennely opetusvideo asiakkaan internetkäyttöliittymän hyödyntämisestä tosielämän tilanteissa. Asiakkaan tavoite oli tehdä käyttöliittymäänsä tutummaksi mahdollisille käyttäjille ja esitellä sen toimintaa opiskelija- ja liikeympäristössä. Käsikirjoitus kehitettiin yhteistyössä asiakkaan, käyttöliittymän toimittajan ja hyödyntäjänä toimineen ammattikorkeakoulun kanssa.</p> <p>Ammattimaisen videotuotannon työnkulkua kehitettiin insinöörityössä omaehtoisella lyhytelokuvatuotannolla, jonka esituotanto-, tuotanto- ja jälkituotantovaiheista saatiin tärkeää käytännön tietoa ja taitoa yhden hengen työryhmän työnkulun perusteiksi.</p> <p>Insinöörityössä selvitettiin asiakkaan tarve opetusvideon tuotannolle ja haluttu tuotannon tyyliunta. Projektin alussa selvitettiin myös muiden osallistujien roolit tuotannossa ja heidän työskentelytapansa projektin aikana. Saatiin selville, että ammattikorkeakoulun oma tutkimuskohde toimi lähes sellaisenaan dokumentoitavana tosielämän esimerkkinä. Ammattikorkeakoulun tutkimus oli kuitenkin pitkäkestoinen, joten päätettiin, että ei dokumentoitaisi tutkimusta kokonaan, vaan osa opetusvideosta kuvattaisiin dokumentaariseen tyyliin ja lopputulos esitettäisiin dramatisointina.</p> <p>Insinöörityön tuloksena syntyi käsikirjoitus, jonka perusteella voidaan tuottaa ammattimainen opetusvideo narratiivilla. Projekti osoitti, että ammattimainen videotuotanto on parhaimmillaan ryhmätyönä, jossa eri osa-alueet on ulkoistettu työstettäväksi erikoisosaajille. Yhden tekijän videotuotanto kärsii aina joillakin osa-alueilla, koska jokainen on hyvä jossakin, mutta kukaan ei ole hyvä kaikessa.</p>	
Avainsanat	videotuotanto, käsikirjoitus, editointi, lyhytelokuva

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Appendix 1. Kohti parempaa kaupunkikokemusta Living Lab menetelmin.

1 Introduction

Independent video production is often a production that does not aim to be commercial or profitable. It might be a hobby for people enthusiastic about capturing video and making fictional short movies or documentaries. If one produces independent short movies for personal use only, the guidelines are set inside the maker's head and no other boundaries affect. If a short movie is aimed at public distribution through Internet video services, there might be guidelines concerning the length or material of the production but still the means are endless. If an independent video production aims to public events such as short film festivals, deadlines and production value issues are added to the bundle. Target audience might also change along the way. Artistic view is still in the hands of the maker or makers but other rules apply.

A commercial video production is one where guidelines are set together with a customer. The maker of the production holds the artistic view but needs to share it with a customer and decide together how the video will be made. Other guidelines such as a schedule and target audience are set by the customer and while the maker in charge of the actual video production makes the decisions while filming, the final outcome is the result of group work. Even though the rule of "whoever pays the bills has the final say" applies, it is important that the customer and the video maker are on the same wavelength. It is extremely counterproductive to shoot a video and afterwards hear from the customer that the approach was nothing that they were expecting.

In my thesis I will compare different approaches and working methods in a video production. My goal is to develop a professional workflow that can be applied to any video production regardless of the purpose of the video. I will compare three of my fictional short films and one customer project that share some common elements but are vastly different in production value and the final result.

The first fictional short film is a 30 minutes long "Täällä Vartioin Minä" that I produced in the summer of 2011 and edited during fall 2011. The goal of the production was to produce a whole 30 minutes of short film from scratch by myself and analyze how much is done right with the expertise I had and what are the biggest difficulties in the production as well as in the outcome.

The second fictional short film is a 7.5 minutes long "I remember you" that I produced during fall 2011 and winter 2012. The point of this production was to apply what I had learnt from "Täällä Vartioin Minä" and make a professional short film to enter a competition of the University of Turku where educational short films about bullying were sought after.

The third short film is a 3 minutes long fiction that I produced in spring 2012. The goal for this short film was to achieve maximal professional production value in a short period of time and to gather more experience about filming indoors.

As a customer project I planned and produced a demonstrational company video in cooperation with Art and Design City Helsinki (ADC). The video clarifies the use and professional aspects of an online community platform designed for ADC by a company called Solid Angle.

2 Audio visual productions

2.1 Independent short film production

Independent production as a term tends to have a different meaning in different contexts. In general independent movie productions are considered to be any productions that have been done independently from any major commercial production companies, thus the term: independent production. [1]

The term has been used in the field of films for many decades and already in the 70's in the US the term "independent production" had divided into two different categories. One category was independent films that were done in cooperation with commercial production companies which were not part of the Motion Picture Association of America (MPAA). The other group was films that any production company belonging to the MPAA had produced, but in which the directors had an unusual freedom to fulfill their artistic vision. Normally the major production companies such as Warner Brothers, Columbia and Paramount Pictures had a rather large influence on the final result since they were financing the film. Therefore, any films that were minimally or not at all controlled from the production company were considered independent. [2,28]

In Finland independent productions have been considered as films that have not applied or received any financial support from the Finnish film foundation (SES). In general this means low budget films that have been done as a hobby by people who have no professional education from the field of film. These kind of films normally do not receive support from any production companies in Finland either. Due to the lack of financial support most of the independent films in Finland are short films. [1]

Independent film productions have gathered more audience as the equipment and technology pricing has come down and the Internet has offered a free distribution platform through which the filmmakers can instantly reach an enormous audience worldwide. There are also different events such as festivals that promote and acknowledge independent films. The number of such events has been growing since more and more people have started making movies independently as a hobby. These filmmakers are

attracted by the freedom of doing exactly the type of films they want to make regardless of any ongoing trends or normal rules in the professional movie making. [1]

However, as larger and larger audiences become aware of independent films as well as short films in general, the independent filmmakers pursue more ambitious projects. They want to produce high quality short films and in some cases feature films as well. In Finland also the professional film workers have noticed the development and in 2012 for the first time ever the Finnish short film of the year was awarded by SES in association with the Finnish public-broadcasting company YLE. [3]

My personal interest towards short films caught fire slowly but in fact it was a major influence when applying to Media Engineering degree program. I wanted to learn more about different filming techniques and editing as well as cinematography in filmmaking. While I knew cinematography was not a part of the Media Engineering degree I was still a bit unsatisfied by the small number of audiovisual courses in the degree program. Therefore, I decided to make a short film from scratch during one summer so I could learn filmmaking in practice. As a result of a summer and autumn of hard work, a short film "Täällä Vartioin Minä" was finished.

2.2 Company video

Company video or corporate video is a production that is beneficial for a company and has become more and more relevant since the Internet video library and the content creation has rapidly increased during the 21st century. It can be anything from a promotional television advertisement to a yoga training video but the essential meaning is to showcase audience the products or services of a certain company. The power of company videos should not be underestimated because a bad quality video is most likely to be harmful rather than neutral to the image of a company. Good quality video on the other hand can raise sales or improve the visibility of a company drastically. [4]

Recently many companies have realized the potential of humorous company videos that will attract attention on public video sharing platforms like YouTube. As a video goes viral, meaning that it spreads across the globe quickly like an infectious virus, it will even reach people that are not otherwise interested about the company but enjoy

and are entertained by the video. This brings enormous visibility to the company as was seen when a television channel TNT in Belgium launched a humorous but promotional company video on YouTube. The video gathered over ten million views in two days when it was published and millions more during the following weeks. [5]

In the end of 2011 Metropolia University of Applied Sciences' office in Leppävaara was contacted by a company called Art and Design City Helsinki (ADC) who wanted to order a company video focusing on their online platform. I was offered a possibility to do my Thesis about this customer project and I quickly accepted. The video needed to showcase an online platform called Pasila Living Lab where different projects can be established and different parties can group together to address issues and work back and forth with the ideas. The plan was to find a real life case that I could document and thus present the platform more coherently on a video. From my previous independent short film productions I had learnt how to plan a production for one person team which was helpful in this production since I was also the only member of a production team. The production was carried out in cooperation with ADC, Solid Angle and Haaga-Helia University during spring and summer of 2012.

3 Pre-production

3.1 Pre-production steps

Video or film productions regardless whether they are independent or commercial should consist of three parts: pre-production, production and post production. Contrary to what many people think pre-production is actually the most important out of the three. The more professional productions get, the more they invest time and money to pre-production phases. The reason for this is clear as the old saying goes "Well planned is half done". Even though the physical workload is many times lighter during pre-production, the decisions made affect the production from that point on to the very end. [6,10]

Idea, script and approval

Mostly in customer projects the idea comes from the customer and ideally the customer has a clear view of what they want. Idea is the vision or thought the client has about what the production should handle. However, things do not always go according to textbook so the director of the production must have means to help the customer in realizing what can and cannot be done. This is very essential since the view of the director might differ drastically from that of the customer. Nevertheless, the video is produced for the customer and, therefore, it is important to get an approval from the customer before anything is done. It is very counterproductive to film a video and find out from the customer that the direction is totally wrong from what was originally thought about. It is an utter waste of everyone's time and resources.

Script is the backbone of a production. It describes the whole production as clearly as possible step by step so that by looking at the script anyone can follow the story and what the production should include. However, the script is not a technical guide and one script has about as many outcomes as there are people directing those scripts. The script lists every scene with the needed characters and how the scene is shot. Director is the one whose artistic vision supports the script and changing the director changes the result. As an example a script might have a scene in a warehouse where two people meet to exchange a briefcase. A director chooses what kind of warehouse

is used in the scene, who the people are and what mood the scene has. [7,94]

Script is also used in editing to get the scenes together as the story intends. If the scenes are not already arranged chronologically the editor uses the script as a timeline to arrange the scenes. For films the script is written before the filming begins – at least in most cases. This allows for scheduling the filming since the scenes are not shot in the order they appear on the final result. If a film begins at a beach and ends at a beach, both the beginning and the end are most likely shot back to back. It takes a lot less time to film all scenes at one location with one go, than to shoot one scene, move elsewhere and return later to shoot another scene. [7,121]

In documentaries the script might be written even after all footage has been filmed. This is not a preferred solution since the script really tells what should be filmed even if the filmed event is a spontaneous one where nobody knows what is going to happen next. If the footage is already filmed and the script is written afterwards, the point for a script is to make a coherent story out of the miscellaneous material. A script may have very detailed information about camera movements and angles if it is necessary for the story but most of the time the script just tells what the audience sees and what happens leaving it for the director to decide where the camera is positioned. [7,292]

Choosing production equipment

At the moment the most suitable selection for a video camera in most cases is digital single lens reflex camera (D-SLR). They offer depth of field which can very well be the difference between a home video and a professional masterpiece. They are also smaller and lighter than professional video cameras. However, there are some limitations to these D-SLR cameras and it is important to know the issues when choosing the right equipment for any production.



Picture 1. Canon 5D Mark II, Digital single lens reflex (D-SLR) camera. [8]

D-SLR cameras are not designed to be used as video cameras and the video shooting possibilities were only brought to the cameras by Canon at first as a fun addition to still photographs. With this in mind it is essential to use either shoulder mounting camera rigs, tripods or other stable camera docks to acquire stable footage. If the footage is very shaky it will look disturbing, unprofessional and more importantly it will bring out one of the key problems in D-SLR cameras' video capturing abilities. [9]

Traditional digital video cameras have used CCD sensors for capturing the video image on the memory card. This means that the shutter will open fully on every frame and capture a whole frame at once. D-SLR cameras use CMOS sensors where the shutter captures frames in several fields from top to bottom. This means that if a camera is stable the shutter will have enough time to record the whole frame from top to bottom but if the camera is panning really fast, the part of the image at the bottom has already moved to somewhere else when it is recorded resulting in skewed frames. This event is called rolling shutter. When D-SLR camera is on a stable surface like a tripod and is panned fast to either left or right the frames will be skewed horizontally but might be still acceptable. However, if the camera vibrates or moves fast to all directions – which is usually the case when the camera is handheld – not only will the frames be skewed but they will be distorted as well. The camera should, therefore, be placed on a tripod and not used handheld. Usually the camera needs to be moved during a scene and since tripod will not allow the camera to move from a static position, there are shoulder mounting rigs which hold the camera and use a body of the cameraman to distribute the weight of the camera to a wider area making the footage stable. [10,1-2]

Lighting equipment is essential for any video even though the growing rate of uploaded videos in the Internet might suggest otherwise. Since almost everyone has access to some kind of video cameras, it is easier to push the recording button and capture video in the occurring light than to set up additional lighting or use other accessories. In professional productions even in sunny weathers the sun is not the only source of light. Bounce cards, also known as reflectors, are used to reflect the daylight back on the shadowed side of a subject or an actor. If the sun light is too harsh there need to be diffusion in between the subject and sunlight. Diffusers are cloths that are big enough to cover the subject from a needed distance. If that distance is five meters then the diffuser needs to be bigger than the subject in front of the camera. This, however, softens the harsh sunlight and makes the footage more natural looking. [11,47]

Sound recording also has certain aspects that should be acknowledged. Even though most video cameras have internal microphones to capture audio it is best to use external audio recording. In professional group working environments this usually means that there is a microphone boom operator and on-the-set audio mixer. If the production team consists of only one person who is responsible of filming, audio recording and everything else, boom operating is out of the question. If an interview is being filmed then a tie microphone, also called clip microphone, is a good choice and if it is wireless, the use is even easier. The microphone is just attached to clothing and the audio is recorded externally while camera films the scene. [12,78]

Motive and target audience

When executing video production for a customer, the motive is as simple as producing a high quality product the customer has paid for. Also the target audience might be thought about in the customer side. If the customer only has an idea for the production but does not have the knowledge of target audience, the person in charge of the production should know how to identify it.

Understanding the preferences of people helps to identify the target audience. In video productions the genre or type of the production also defines the target audience. If

there is a horror movie in production the target audience probably will not be pregnant women who like family dramas. However, if the goal of the production is to gain a very miscellaneous audience then it helps to gather information about current trends and lifestyles. Emotions drive people and productions are much more personal for people if there is something that they can relate to – current trends and lifestyles affect different people simultaneously. [13]

Actors and extras

Unless a production only consists of landscape shots and scenes with furniture or other objects, actors are required to bring the story to life on camera. Independent filmmakers often start with acting themselves or getting their friends to come in front of the camera. As the skills develop the filmmakers – even if they are independent – might want to move towards professional quality productions, in which case the actors should be credible. Even if the group of filmmaking friends consists of good actors it is unlikely that every production can be fresh with the same actors. Therefore, actors should be sought after.

Actors can be contacted by searching around acting forums or theaters but even if an actor is good, the talent might not be suitable for the production at hand. That is why it is useful to compare and consider different alternatives and acting auditions make it possible. Auditions are events where the director sees the actors in person and through different tasks, such as acting improvised scenes, the director can find out which actors are most suitable for the production. Auditions can be held openly for anyone who receives the information and wants to come and try, they can be closed so the selection can be made from a pre-determined list of possibly suitable candidates, and they can be arranged for people familiar to the filmmaker from previous productions only. [14]

Extras are not actors but they emphasize the feel of a surrounding world. Extras are the people walking on the background or sit at coffee houses in movies. In some cases extras can have brief lines or short spoken dialogue but mostly their role is not noticeable in any way. The seemingly redundant role of the extras really does add to the credibility of the production but often extras are treated badly on the set. In big Holly-

wood movies extras usually will not see the director at any point and even coffee cups are treated with more respect. Because extras rarely get paid and usually are on the set merely as a hobby, their presence should be treated with respect. [15]

Budget

Basically every video has a budget regardless of the type of the video and equipment used. This is because if there are no other costs at least the camera used to shoot the video costs something. This type of "budget" in most cases does not matter to the person filming because the purpose is just to film something, but the camera has already been bought and some money spent. In professional video productions more and more things cost which makes budget something to thoroughly calculate during the pre-production. Everything costs: script writer gets paid, finding locations results in traveling costs, possible rights to stories cost and permits to filming locations cost. The same applies in production phase but the amount of payables only increase. If the production does not have equipment of its own, it needs to be bought or more often rented. Also the production personnel get paid unless they are volunteered, which usually is the case in independent productions but rarely in professional work. Food is a considerable expense as well as travelling to different locations, with all related costs from temporary residency close to set to marketing the film while on set. [7,186]

Also the type of footage used affects the budget. If there is a need for archive footage it needs to be considered in the budget. Post production costs depend on the level of post production needed, meaning that normal footage without special effects is cheaper than footage with a lot of effects and possible computer generated imaginary. Easy footage can be edited by a single editor but laborious footage is in many cases edited by group of people which generates more costs. There are so many underlying costs that it a professional video maker always constructs a list of all expenses. The list should then be filled with the up-to-date prices which essentially tell the budget of the production. A budget indicates the bare minimum amount of money that is required for a production. [7,188]

Channel for release

If a production is a personal project, the decision for a release channel can be based on the platform that can gain the largest audience. A maker could also be looking for feedback which could affect the selection of a certain channel for release. Working with two video sharing platforms; YouTube and Vimeo, I have experienced that while YouTube gathers a wider audience, the feedback is also a lot less subtle than what is possible to get from Vimeo. Anonymity clearly reflects people's behavior in the Internet and so it also does in the comment sections of YouTube. In Vimeo for example a person might suggest an independent filmmaker to use more additional lighting so the scenes would be more lit, while in YouTube the same production could be described simply as a waste of everyone's time and life. [16]

In marketing there is a term "distribution channel", which means by the formal definition: "The chain of businesses or intermediaries through which a good or service passes until it reaches the end consumer." [17]

In a video production the same applies and the channel for release is the link between the readymade video and the audience that it is targeted for.

In a customer video production the customer normally has an idea of how the production is distributed afterwards. It can be available in a regular DVD format, BluRay disc for high definition video, a plain video file or online playback. With different release formats there might be more parties involved; DVD distributors, BluRay distributors or service providers for online releases. If the production is personal, the cheapest channel for release is on the Internet. [18,168]

3.2 Pre-production of the company video

For the customer production I made a draft of a script based on several meetings we had with ADC and Haaga-Helia. The first draft was a rough walkthrough of the video and the purpose for it was to see whether I was headed in the right direction with the production. The script came back with suggestions for changes and I modified the script accordingly and sent it back for re-evaluation. The interaction between me and ADC was essential for the success of the production since I stated already in the early

meetings with ADC and Haaga-Helia that I should not begin filming anything before we had an agreement about the script. This would benefit everyone since the production would finish sooner and the materials could only be filmed once, unlike when filming first something that ADC did not want.

No storyboards were made for the production because the filming would happen in separate parts and it would be partly documentary filming and partly dramatized. For the documentary parts I planned to film as much as possible so the editing would not suffer from loss of material. For the acted scenes I would write an approximate plan because I wanted the scenes still to maintain a certain documentary look and it would be best achieved by giving rough explanations of the scenes and then documenting them while actors act. The scenes could then be filmed again if necessary but they would mostly be shot from the beginning to the end at one continuous shot.

3.3 Pre-production of "Täällä Vartioin Minä"

For *Täällä Vartioin Minä* I wrote the script from scratch in a month during spring 2011. I had an idea for the short film and some scenes in mind, but otherwise I had to come up with everything during the writing period. I was mostly relying on myself while writing but I asked my brother to share some neutral opinions about certain scenes so I would rewrite them if they seemed silly. The script was not polished to perfection since the filming was scheduled to start already one and a half weeks after the script was finished.

When the script was close to being finished I started seeking actors and crew from PIXOFF.net which was an Internet forum created for independent filmmakers and actor hobbyists. I received tens of applications for different roles but only two interested about crew member positions. Since I had already scheduled the filming to start in less than two weeks I had to take what I could get and the final production team consisted of me, sound boom operator and an assistant director, neither of which I had met previously. Due to the tight schedule it was not possible to arrange an audition for the actors so I had to make the selections according to the applicants' prior experience in acting.

I had one production meeting with the assistant director where we went through parts of the script and planned for possible filming locations. I had most of the outside locations already in my mind but none of the inside locations. Luckily the assistant director had connections to various places and we could find also the inside locations relatively easily. After our meeting we organized another one with the whole team, except for the ones that could not make it. The meetings were brief but useful so everyone would get to know a little bit about who they would work with during filming.

Approximately one week before filming one of the lead actors called and opted out from the production due to schedule problems. I did not panic because the daily schedule for each scene had not yet been made. Fortunately the assistant director knew a person that could be asked to fill the role and I gave my permission for the assistant director to cast the role, even though I would not have time to meet the actor before filming. The actor accepted and was pretty suitable for the role as well.

I did not draw story boards because I knew I would not have much time to check the locations beforehand and some adjustments would need to be made every day on the fly. The assistant director prepared a filming schedule for the time period of one and a half weeks of filming. I did not make a list for the shots we would need since I was confident that the script would be enough.

For camera I had chosen a Panasonic AG-HPX171E because I had experience in using it and the video capabilities were good. The Panasonic did not suffer from rolling shutter problems like D-SLR cameras and it could capture 50 frames per second which both would be useful in the fast moving action scenes.



Picture 2. Panasonic AG-HPX171E, professional video camera. [19]

3.4 Pre-production of “I remember you”

My second short film “I remember you” started as a project for the University of Turku while they were looking educational video material about bullying via a competition. I wrote five scripts for different short stories for which guidelines, such as a theme and maximum length, were given by the University. They were looking for videos that could be linked to the syllabus of elementary schools that teach about bullying. The theme for my short film was memories related to bullying so I wrote the script partly for past and partly for present. However, while in pre-production it became clear that the deadlines were coming too soon. Therefore, I decided that the short film would not be aimed at the competition of the University of Turku. I returned to the writing table and since there were no more required guidelines, I edited the script to distinguish two time periods more clearly by having the present day situations happen in fall and the past events in the wintertime. This was now possible because there were no more specific deadlines and filming could be done during a longer period of time.

Again I did not organize any auditions but instead I contacted two actors from Täällä Vartioin Minä and offered them the roles. I considered Täällä Vartioin Minä also to be an audition for the actors for future productions and, therefore, could contact the actors who had been most convincing. The present part of the film takes place mostly outside and the rest inside a moving car, so finding locations was not difficult. I chose

a road strip from Kirkkonummi for the scenes taking place in the present day, because the actors lived close by and I wanted to make the filming more comfortable for them. For the scenes inside a moving car I borrowed my mother's car because the person driving in the short film was also an adult woman and the car had to be a regular sedan which my mother happened to have.

For the scenes taking place in the past I searched old wooden schools from the Internet and found one at Hyvinkää that was not in student use. I contacted the personnel in charge of the school and found out I could rent it for filming purposes. I also contacted the principal of an elementary school in the same courtyard as the wooden school and acquired her approval for the project. The principal also helped me to seek extras from the school. The actors for the scenes happening in past I found through friends and acquaintances.

4 Production

4.1 Production steps

Once the groundwork for the production has been done the next step is the dive in to the actual production phase. The basic objective for the production phase is as simple as to produce as high quality material as possible. Stable video, clear audio and well lit scenes are the goal to achieve. With this in mind there are certain aspects that affect the quality of the produced material. [20,118]

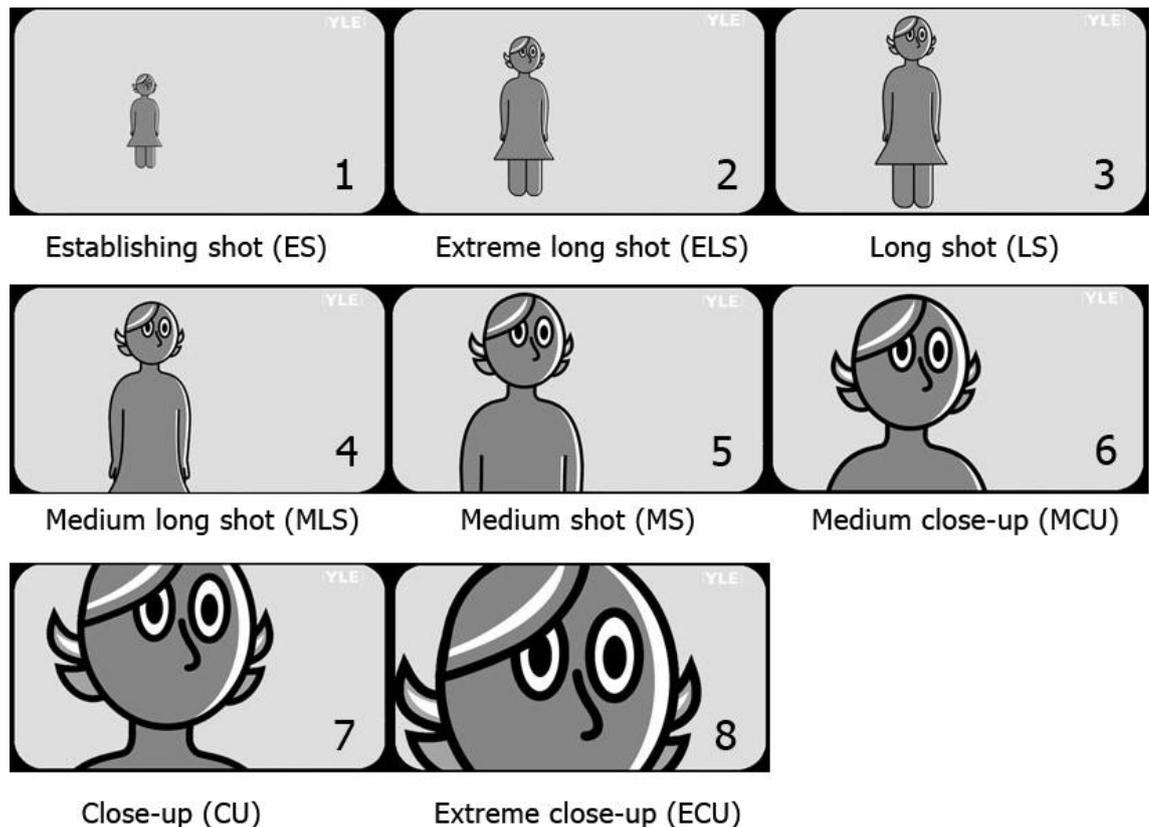
Camera settings

When the record button is pressed, the camera starts to record video frames to the memory card or other storage media of the camera. The camera records with the settings it has by default, unless the cameraman has made changes. The changes are very important and while the default settings might be acceptable, at least they need to be checked so that everything is like it should be. First the encoding should be set. Cameras have mainly two encodings: NTSC and PAL. The encoding affects the frame rate which is the rate of how many frames per second the camera captures. NTSC encoding that is used mainly in US and Asia has a default frame rate of 24 frames per second. The standard PAL encoding in Europe and Africa has frame rate of 25 frames per second. Frame rate around 25 frames per second gives a video the similar motion blur that films have and thus is preferably used when shooting video. Even though the human eye can only process 10 to 12 images per second [21,24] and, therefore, cannot tell if a video plays in 24 or 25 frames per second, the choice still needs to be made so the footage is captured with the same frame rate throughout the production and the post processing is unified. [18,15]

Besides the frame rate, resolution also has to be set in the camera. Recently high definition – meaning video with the resolution of 1920 horizontal and 1080 vertical pixels – has become the preferred option but if the video is aimed at DVD release then the higher resolution is not necessary and might slow down the editing in vain. In some cameras there is also an option for resolution of 1280 horizontal and 720 vertical pixels as well as the DVD quality 720x576 pixels. [22,40]

Framing

Image can lead the viewer's eyes and so framing is used to focus audience's eyes to certain parts of the scene. There are a few different ways of indicating different shots but the most common collection is the set of eight different framing options. Early filmmakers have named the shots and given them abbreviations to ease the workflow on the set. Moving from one shot to another is usually done with cut in editing, or zooming while filming, latter being the more rarely used option.

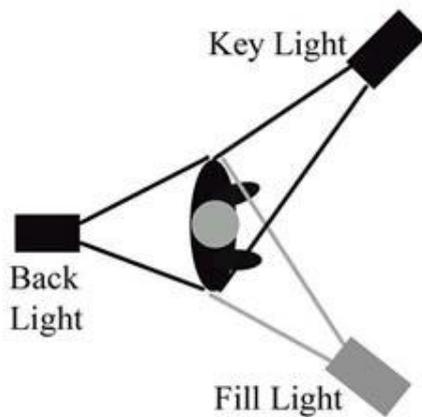


Picture 3. Eight different standard shots [23]

While there is no strict rule on how to use the shots constructively, one rule of thumb is usually to start longer and then move closer to the subject so the audience has time to establish where the scene is taking place and what is happening around the main character. On the other hand shots can also be used as effects to deceive the viewer. If a scene starts with an extreme close-up of a character, the audience can only wonder where the character is and what is happening until a wider shot is revealed. [18,48]

Lighting

What regular audience might not realize while watching films is that the scenes are not lit with sun light or regular household lamps. Scenes taking place inside need to be lit by studio lamps. If there are really big windows on the set and a lot of sun light outside, the filming might be possible without additional lighting assuming that the lens of the camera has large aperture and, therefore, can capture more light. The biggest apertures affect the lens' focus are making it really shallow and while it might be an artistic choice, it can cause problems because it makes adjusting the focus a lot more sensitive task. The standard studio lighting is a three-point lighting in which the subject or character is lit from both sides and the back.



Picture 4. Three-point lighting [24]

With lamps it is a preferable option to use soft boxes which are basically diffusers for the studio lights. They soften the direct light and distribute it from a bigger area as the diffuser cloth works as a light distributor on its entire surface. If it is not possible to use soft boxes the lights need to be aimed to the walls or in the ceiling from where they reflect the light on a bigger surface making the light softer. Then again, reflecting the light also drops its intensity making the soft boxes a better solution. [18,110]

If the lighting on set is not sufficient, the sensitivity of the camera's sensor can be electronically increased. In photography this happens by increasing the ISO value. The

equivalent in video cameras is gain. High gain can be used as an artistic choice but too much gain can be irritating to the viewer as gain always creates noise to the footage. Furthermore noise is many times used as an artistic choice and it has an association of making the image dirty and rough. Low noise, therefore, is considered to have a clean and smooth effect to the footage. This should be remembered when filming, so the content of the footage matches its style. Using a lot of noise in children's toy commercial might make it look weird, sarcastic or even a bit scary. Then again using low noise throughout a horror film might leave it less suspenseful. Altogether low noise is usually better than high for high noise is clearly visible. [22,26]

Sound

The sound should always feel related to the footage even if it was recorded separately. This means that there should be a certain echo in a person's voice if the surrounding room is big, and the ambient noise should match that of the environment. If the surroundings are too noisy the dialogue can also be recorded separately afterwards but it requires good repetition from the actors. Foley recordings are always done separately and Foley effects are sounds that are not necessarily heard on the set but add to the realism of the film when added in post production. Such sounds are gunshots, punches and footsteps. [25]

When sound is recorded separately, a film slate or a clapboard is used in the beginning of each scene. The slate has two pieces of wood, plastic or similar material, and a hinge so when the pieces are clapped together in front of the camera the video track gets an indication where the sound and video should be synchronized together in editing. If the production team consists of only one person then it is literally impossible for that person to film and hold an audio boom not to mention using the film slate. In such cases an external microphone can be plugged into the camera to provide much higher quality audio. This is also useful when filming with D-SLR cameras since the audio intake of the camera is usually located near the lens and, therefore, all focus adjustments done with the lens are heard on the audio track. In the final result this of course destroys the illusion of no camera because audience can hear that the camera is being adjusted. [12,124]



Picture 5. Film slate, also known as clapboard. [26]

Production personnel

Movie making especially is a team effort and when filming movies, documentaries or television shows even the camera is used at least by two people simultaneously. There are also people in the production team that might not be around when the actual filming happens but are otherwise related to the production. Producer, for example, might be involved with the filming and other steps thoroughly or just leave the decision making and artistic decisions to the director and crew. Producer, however, is the person who handles the financing and pays all the bills. Scriptwriter obviously writes the script for the production but may do that in the pre-production phase or during post production for documentaries or other material where the filmed events occur spontaneously. [7,152]

Director is in charge of the whole visual production deciding where cameras are placed and where the filming happens. Director is also the link between actors and the crew so the main task for the director during filming is to get the desired acting performance out of the actors. This is why the director should appear with certain calmness and punctuality even when under pressure; it is on the director's shoulders that everyone has the space and peace to perform their tasks. A chaotic or hysterical director makes the production tense and the work harder for everyone. [27,430]

Director of photography or cinematographer is the person in charge of the camera positioning, moving and handling, together with the director. In small productions camera

operator and cinematographer is usually the same person, but in large productions the director of photography does not necessarily touch any of the cameras but simply coordinates where the cameramen should move. Camera assistant is the second person working with the camera and usually is in charge of focusing the camera constantly during scenes. [18,156]

Sound recordist makes sure that the audio for any scene is free of distractions and also records ambience and other needed sounds on the set. Because the sound recordist is only in charge of taking the audio in, sound assistant is needed to hold the microphone boom over actors. Gaffer, also known as electrician, makes sure the lighting is efficient for scenes and handles all power sources on the set. Grips are important people who move heavy production equipment, lighting and furniture on the set. Grips work in the command of cinematographer. Production manager is not needed in smaller productions but as the workload grows, production manager is a key person in making arrangements for the production such as budgeting. Production assistant shares responsibilities so the director and producer have less to worry about. Handling release forms and getting signatures on contracts are tasks for production assistant. Location coordinator knows the filming locations, where to find certain locations and how expensive they are for the budget. Casting director knows essentially the same things but about actors and, therefore, finds suitable options for the director to choose from. [7,155-156]

Quality control

If there is any quality control in the production, someone needs to handle it. When talking about independent productions where production crews are small, the quality control is probably done by the person in charge of the whole production. If the director is also a producer and the cinematographer, then the quality is controlled constantly in production – the person behind the camera assesses whether to keep a certain shot or whether to film it again from the beginning.

In a professional production quality control is done by the producer, director or them both. If the producer has given all artistic decision making power to the director then the director is the one assessing and controlling the quality. The production is on the

shoulders of the director so the quality control comes as a natural part of the workflow; if a shot does not look good or feel coherent, the director disqualifies it and the shot is filmed again. However, if the producer hires the crew and the director, the quality is already controlled by the producer. The producer needs to hire the best crew for the production at hand, and the selections are based on the quality which the crew can provide altogether. [7,152]

Quality control can also be a team effort and collaboration between different parties or departments. If a director discusses the script and dialogue or other content with the crew and the actors, everyone can give their input on the quality. That being said, the essential goal of quality control is to improve the quality of a production or if not improve, then to keep on a certain continuous high level. [28,91]

4.2 Production of company video

Production of the company video concentrated around the Pasila train station where Haaga-Helia organized an event called Pasila Day. They wanted to gather information from random passer-bys, about how the services in Pasila area could be improved. Since the day was not structured in any certain way the style of the filming for this part was considered documentary. I had gathered a tripod, a monopod and a shoulder rig to be used when documenting the event. Because of the high light sensitivity of the camera and the thorough lighting of the filming location, additional lighting was not needed.

I quickly found out that the usage of the shoulder rig would have been too much for the calm situation at the station, and, therefore, decided to only use tripod with the camera. This also allowed me to change angles quickly because I only had to carry the tripod with the camera, while rest of the equipment I could leave behind. I got versatile and interesting footage from the Haaga-Helia booth and also around the Pasila train station, to be used as illustrational footage.

The other parts of the production were planned to be acted since the progression of the actual case was too slow to be documented from start to finish. We decided with the customer that the customer along with Haaga-Helia would come up with an end

result for the case that could be then dramatized even if the case had not yet proceeded to that point. This was possible since the point of the video was to showcase the usage of the online platform, and the case of Haaga-Helia was used only as a demonstration.

4.3 Production of Täällä Vartioin Minä

Three days before the start of our filming period I received a call from a company I had agreed to rent a lens adapter from, saying that they needed the equipment themselves and I could not have it after all. A lens adapter is a gadget which allows cinema lenses to be attached to Panasonic giving the footage a lot better and cinematic look.[29] I realized that the footage would look more home-video-like and not so much like a film. However, I had to concentrate on other preparations for the production and just accepted the fact that I would not get a lens adapter.

When the production began there seemed to be no problems with nearly anything. Everyone arrived on the set on time and I had made sure that camera was working properly, had a full battery and no smudges on the lens. I gave a microphone to the sound recordist and concentrated on filming. Close to the end of our first day of filming I checked some of the sound recordings from earlier scenes and realized that the microphone was not properly inserted – no audio had yet been recorded, there was only static noise. Fortunately we had not filmed any dialogue yet so I was confident we would survive with what I had filmed. When inspecting the video footage and when I saw how it looked like a home video instead of a film, I was devastated and realized the film would be nothing like I wanted. I started cutting corners.

When the dialogue parts started I ordered other people to be quiet on the set, used camera on a tripod and had the sound recordist to record all the audio. It quickly became clear that doing everything thoroughly was taking much more time than if some things were done more loosely. Since we were a little bit behind schedule almost all the time, I started to film scenes handheld, let others talk on the set if there was no dialogue to be recorded and also left the audio out in some parts. I thought I could easily record the needed ambience and Foley sounds after the primary filming period, so we could keep up with the schedule. When recording sound the assistant director

used a film slate to give a synchronizing point to editing but since he forgot the numbers of the scenes and takes, I did not ask him to say the information anymore in the beginning of each take, but simply thought I could match the sound files and video files by ear in the editing phase.

Lights were only used when filming inside. While filming outside the sun was our only light source but I did not use diffusers either. This resulted in some of the scenes having too much light and the actors overexposing. When the sun was covered by clouds the scenes were lit differently. Because following the schedule became the most important part for me when filming, a few lighting errors were left in the film. One of the elementary mistakes I did a few times when I was filming outside and the sun was shining bright, was wearing sunglasses. I had the sunglasses on even when I was filming so the footage seemed fine to me but in reality it was too bright.



Picture 6. Setting up the lighting for "Täällä Vartioin Minä" indoors filming.

The locations were not all found when we started filming and especially the indoor locations were problematic; I did not know anyone who would have had an apartment suitable for any of the scenes. The assistant director had ideas for locations we might be able to use, and luckily we ended up getting every location we needed. At that point though, it was no longer possible for me to choose locations since we had to ac-

cept anything we got. I was forced to change the script a little so the story would happen at a different location than what originally was intended. Also some of the locations did not match with the surroundings of the story and while the story was set in southern Helsinki, the locations were clearly different than anywhere in Helsinki.

Since I had not drawn storyboards and had not made any list of needed shots for every scene, there was material that I forgot to film during the filming period. I filmed some establishing shots on my own after the filming days had ended so my working hours grew to an average of twelve hours per day. Because I forgot to film certain angles to some of the dialogue scenes and other scenes as well, I knew that the editing would not be easy. I still tried to focus on the tasks at hand and not to worry about anything that was not directly related to the filming period. Nevertheless, I started to get worried about my well-being.

The filming for *Täällä Vartioin Minä* ended as the schedule suggested and almost all needed footage was shot during the filming period. Apart from two days of slight rain, the filming period of one and a half weeks was probably the sunniest in the whole summer. And when it was cloudy and a little wet we were mostly filming indoors. When the production ended I collapsed physically and spent the following week sleeping an average of fifteen hours per day. I felt exhausted and dizzy but regained normal bodily functions in a week. I started my summer holiday, after which I would start editing.

4.4 Production of *I remember you*

I had learnt a lot from the production of *Täällä Vartioin Minä* and one key factor I kept in mind for my second short film was the stability of the camera. I had also chosen a D-SLR camera for the production, since it produced beautiful footage and much more cinematic look than the Panasonic AG-HPX171E. I had also made two shot lists based on the script, one for each filming day. In the shot lists I had indications for framing, needed equipment, needed actors and the exact location for every shot.

The first day of filming in November did not hold any surprises other than the problems with schedule – we ended the filming about three hours later than the schedule

suggested. Even though I found out my perception of time was a little optimistic, I still considered the delay to be within moderate proportions. Because of the schedule delays we had to change the filming order of certain scenes but because I had not drawn storyboards or made too detailed plans, the sudden changes were not confusing anyone. Also with the help of the shot list I could see what I had filmed and what was still missing even when the order was changed.

Because of our tight schedule, in one shot the actor could not manage with the scene as the story required but we did not have time to take it again after few tries either. We ended up rescheduling one shot for an extra date. The atmosphere was more relaxed on the extra day, because we only had one shot to finish and no timetable. The shot was successful after a few tries and the overall feeling of the scene was instantly improved drastically. Only problem was the weather, because the winter had almost arrived and in the beginning of filming we had to wait for a few minutes for the raining to stop. We soon could start but the temperature was totally different than on the first day of filming, which altered the color temperature of the video making it look bluer. I was still happy that the acting performance was successful and I thought I could correct the color temperature in post production phase.

We continued filming a few months later at the end of February 2012 so there was a proper winter already. For the camera, I had rented a jib which I wanted to use for an establishing shot. I used tripod for any static shots and a do-it-yourself shoulder rig with the camera for any mobile shots. I had done so during the first day of filming as well. Problem with the camera crane was that we had no time to test it on the set earlier and once we built the crane and positioned it, I realized that it did not work at all for the establishing shot; the footage was way too shaky and the seemingly high position of the camera was not at all visible. I then quickly rejected the idea and moved on to film the shot with the shoulder rig. This, however, had wasted our valuable time and we were even more behind schedule.



Picture 7. Jib for the camera [30]

When we had already filmed several shots, I played back some of the material and realized that I had not remembered to turn on the external microphone used with the D-SLR camera. I was disappointed because the same mistake that happened during the production of *Täällä Vartioin Minä* had happened again, only this time I was the one in charge of the audio and, therefore, the only one to blame. Luckily we had shot only material that did not necessarily need original audio and I was confident I could add other audio on top of the footage in editing.

One thing that delayed the schedule was the lack of rehearsals. Sometimes the actors handled the scene well but I was not up to date with camera focus, which resulted in a partly blurry scene that had to be disqualified. On other occasions I handled the camera well but the actors were not convincing and more shots were disqualified. I considered that a huge mistake because most of the actors were children and with rehearsals much of the insecurity could have been cut down. Of course adding rehearsals to the schedule would have extended it with hours.



Picture 8. D-SLR camera and an external microphone attached to a shoulder rig, in production for "I remember you".

The filming day of February could not have been better in terms of weather since sun was almost constantly shining. This, however, was not entirely a good thing because I did not have any lens filters that could darken the footage proportionally to the bright light. As a result, sometimes there was just too much light and the shots were overexposed.

5 Post production

5.1 Video footage in post production

Once all the scenes are filmed the next step is to arrange the acquired material into a solid storyline. If the previous steps are done thoroughly, the post production is an easy task. Post production also has different steps as the video is built together from small pieces, and possible special effects are constructed. Post production holds a great deal in the completion of a film or a video, because bad editing can turn good video footage into an awful outcome. Consequently, if the filmed material is bad, the post production cannot possibly save it, no matter how much effort is put into it. [31,12]

Workflow and editing

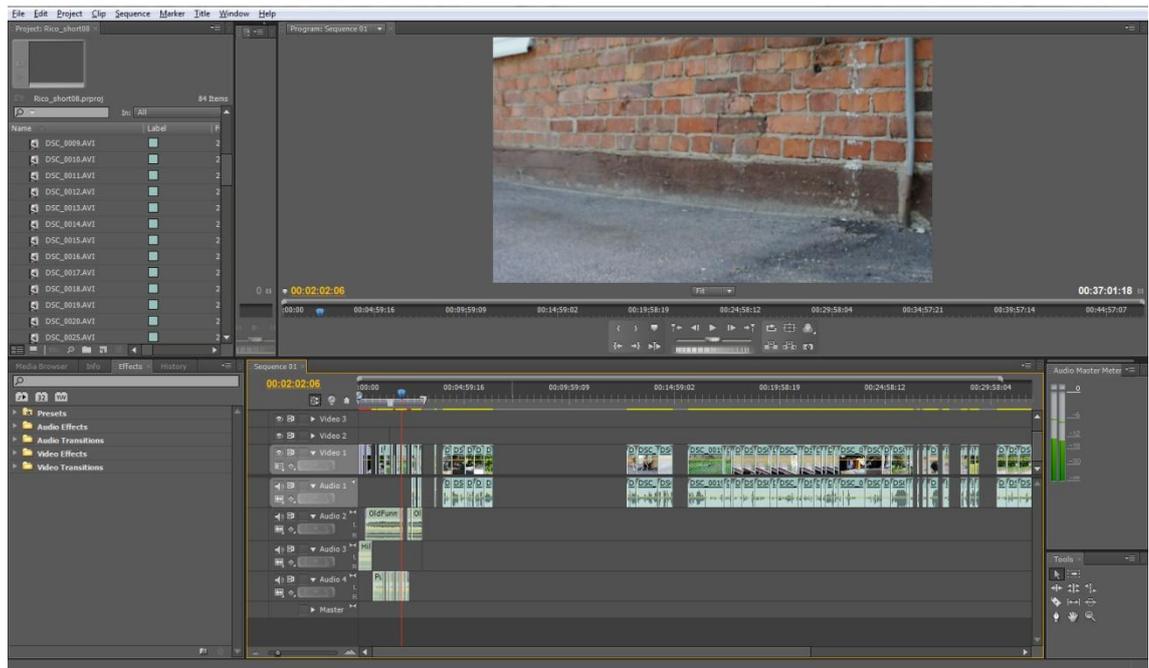
Much like in pre-production and production, once the video footage is transferred on a hard drive of a workstation there should be a plan how to move forward. Efficient workflow saves time and – if the production is a customer project – money as well. Backing up all footage is just as important as planning and filming, and should always be a part of a post production workflow. In fact, it should be the first part. [18,122]

Editing is the biggest portion of post production because all the material is compiled into a complete piece. Special effects and graphics are only parts of certain scenes but editing deals with all the footage. When the three of the world's biggest camera manufacturers: ARRI, Panavision and Aaton, stopped developing film cameras and turned exclusively to digital formats, the turning point between film and digital cinematography had arrived. Even though film is still being used, it is already partly history. [32] With digital video files non-linear editing is possible. Unlike in linear editing, film content that has to be rewound and played back, digitized files allow editing that does not have to proceed in a linear order. Any part of any scene is instantly editable. [33]

Different compression formats

Although digital video footage can be edited freely, the formats differ widely, and that should be considered before starting the editing. Different cameras use different types of compression methods and the ways how different editing software handle the compressions, varies. To put it simple, this means that in the editing software some file formats are handled quicker and smoother than others. Canon D-SLR cameras compress the filmed footage into H.264 format which is a popular high quality compression method that also saves space on the memory card. Apple's editing software Final Cut Pro – that is available only for Mac – cannot handle H.264 files straight out of the camera, so the video files should be converted into more easily editable formats, before starting to edit them. Adobe's editing software Premiere Pro, however, does support native H.264 compressed files from the camera, so no converting needs to be done before editing if Premiere Pro is used. [34]

When the editing software is up and running, the project settings need to be defined. The important settings deal with resolution, frame rate and audio settings and the project settings should match those of the video footage. Resolution and frame rate should be clear since they are already set before starting to shoot, and most people working with the same camera in different projects, use the same settings to avoid hassle. If sound is recorded externally, the settings for audio are also known from the production phase and they just need to be consistent in the editing project. [18,130]



Picture 9. Screen capture of the workspace of editing software: Adobe Premiere Pro.

Three steps of editing

The actual editing can be divided into three steps, regardless of what the project is. Rough cut is the starting point where scenes are quickly put together from the original video footage. Therefore, in this step, the selection of the best takes is carried out and the rest can be excluded from the project. However, as a precaution it is good to store all the original video footage throughout the project, should there be scenes where material needs to be substituted with a different take. Also the audio is synchronized together with the video in rough cut. Before the next step, the rough cut material can be sent to special effects and color modifications.

[20,120]

Refining the edit extends the rough cut, because in refining editing, the video clips that form the scenes are trimmed and cut to form logical transitions between camera angles and takes. The transitions should also be consistent throughout the whole video or film. In other words, it makes no sense to use different transitions between each scene; it only makes the viewers confused. There are two main transitions used in professional video productions: straight cut, where one camera view changes to another instantly between two frames, and cross dissolve, where two different camera views

overlap with each other and the old shot becomes transparent while the new shot becomes opaque. This is often used to indicate passing time between shots or scenes. The third step is polishing, where the video reaches its final form. At this point the graphics and titles are added and the audio levels are adjusted to be consistent. [20,120]

5.2 Sound editing

The meaning of sound for a video production should not be underestimated. Not all videos need sound but a majority of them do. If sound is included to the video its importance for the production is about 70% while the importance of video is 30%. Audiences are so accustomed to normal audio in movies and professional video productions that they can easily hear when something is out of place. Even scenes with seemingly no sound have ambient sounds of the surroundings. As said before, the ambient noise should match that of the environment and if it does not, the audience will notice.

Digital sound editing offers a lot more leeway compared to the analog era and much of the sound editing can now be done simultaneously with the video. Most editing software show the waveform of an audio clip, which is useful when assessing the general level of audio. It can clearly be seen which parts of the video are loud and which are quiet. In editing software that allow using multiple tracks, a narrative or a song can be placed on its own track and modified individually, even if it continues through many shots or scenes. [18,146]

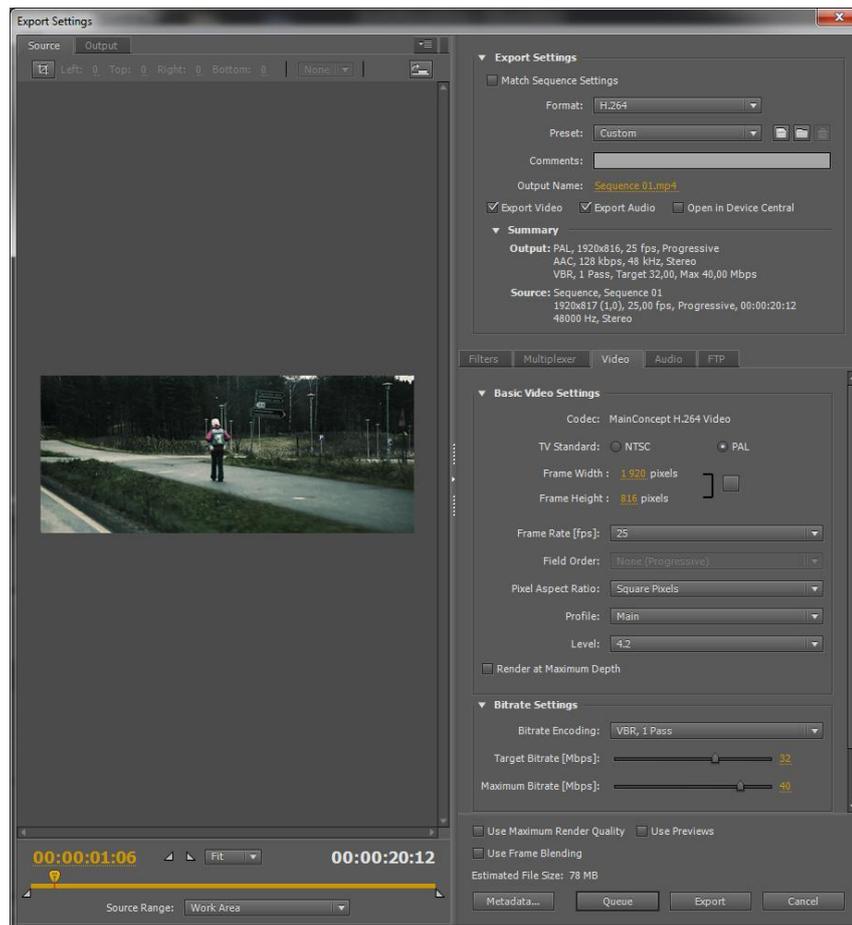
Sound holds a significant emotional connection to what people see. This fact should dictate the sound designing and sound editing, because the audience expects to hear certain sounds when they see certain things. Even if the surrounding sounds at a set are in contradiction with what is being filmed, the soundtrack in the final result should be altered to match the conception of what is seen. The sound editor picks the Foley sounds that end up in the final result and if they are not recorded on the set, they are most likely obtained from a sound library. This is why the sound editing is an important part of any video that has sound. [35,172-173]

5.3 Exporting a video

Even though all editing software have different menus and workspaces, the video rendering or exporting is quite a similar task in all of them. The export settings are essential for the video playback and the channel for release should be considered when the video is rendered. Online, DVD, BluRay and video file releases all have different exporting settings.

First an output format needs to be chosen. The more expensive the editing software, the more options it has, but mainly all video editing software can export video to some extent. Free trial versions might not allow audio to be exported together with the video but in full versions it is basically always possible to export audio as well. Format essentially means the compression that is set for the video and it helps in choosing the best quality in terms of maximum file size. A regular DVD-disc can store 4.7 gigabytes of data [36] but a BluRay-disc can store 50 gigabytes [37] of data. Therefore, while BluRay allows more content, it also allows much higher quality content to be released on it. Video on a DVD is much more compressed than on a BluRay. [38,429]

The standard compression method from the beginning of digital audio and video exporting has been established by Moving Picture Experts Group (MPEG). The abbreviation MPEG is also the name for the compression methods, first being MPEG-1. It was designed for video CD but quickly became obsolete when DVD was introduced. DVD, as well as television broadcasts, used the next generation compression MPEG-2, and MPEG-4 was later on introduced as a standard more compatible with computer graphics. Both MPEG-2 and MPEG-4 are still in use and MPEG-4 is the current standard in high quality and web video, while MPEG-2 continues to be the DVD and television broadcast standard. MPEG-3 was never published since it was being developed when MPEG-2 became the standard, and the work done so far for MPEG-3 was infused into MPEG-2. [39,9]



Picture 10. Screen capture of the export settings in Adobe Premiere Pro.

Bitrate should also be considered, as either constant or variable bitrate can be used when exporting the video. Constant bitrate means that the video is compressed with the same amount of information on each frame, while variable bitrate changes the amount of information for every frame, based on the content. Variable bitrate is usually the preferred option since it compresses the frames with less information more and leaves better quality for the frames with more information. Constant bitrate wastes good information since it compresses at a constant rate, regardless of whether the frames have more or less information. [38,444]

5.4 Post production of company video

I planned an efficient workflow based on my prior experience on video editing. I created different folders for everything from video files to sounds and images, since organizing is a really simple way to keep up with a schedule. Because of thorough planning

in pre-production and production phases, the post production was one step easier. One issue I realized during video editing was the smudginess of the camera lens when documenting during the first filming day in Pasila station. The smudges were not visible on the small screen of the camera but when I brought the video on a bigger computer screen, some of the smudges were really apparent. I could, however, remove the eye catching smudges and the footage could be saved.

The audio editing was easier than in my previous productions since there was a narrative track that was dictating the audio and because it was recorded on a high quality microphone without background noises, the overall feeling of the audio track was more professional.

5.5 Post production of "Täällä Vartioin Minä"

The vacation I kept in between production and post production phases for "Täällä Vartioin Minä", really helped me to get back on the production and start with my batteries recharged. I found myself spending most of the post production time doing sound editing and special effects. I did not have much prior experience of special effects and I had to learn while I was doing, which sometimes resulted in hours of work being wasted, once I had made something that I found unusable in the end. I also had a few nasty surprises when I started reviewing the footage and editing.

The audio in one of the key dialogue scenes was completely ruined by a low humming and popping sound that occurred sometimes only for brief moments, but towards the end of the scene dictated the whole audio track. The popping happened on low frequencies and I could not even hear it in the first place, because I was listening the audio through my headphones, which could not produce such low frequencies. The jarring noise appeared on the audio track because the sound recordist had most likely been leaning on the microphone but could not hear with the headphones, because those could not produce low enough frequencies either. Also, the sound was recorded right next to the actors acting out the dialogue, and so the recordist heard the audio from the headphones but also straight from the actors. This makes it hard to listen just to the recorded audio track. To avoid the mixed feed, the sound booms in professional

productions are really long, so the boom operators can distinguish the recorded and live sound.

I could not improve the audio in any way, so the only possible option was to record the whole scene again. I asked the actors to come to the school's recording studio and played back the scene from a laptop. After seeing the scene, the actors expressed the dialogue again, trying to match the original speed and emotion of the original scene. I took many enough variations, so I could better match the speech to the video. Even though I managed to insert the new audio on top of the video, I had to rearrange the shots a little so when the actors' new dialogue did not match the footage I cut to another angle where their mouths were not visible.

I also decided to re-record another scene with another actor because the scene was originally shot in a subway train. The surrounding noise was so loud the actor almost shouted the monologue. We re-recorded the scene and again I took many different variations, which I then added on top of the video. The sound editing was altogether a mess because I had renamed the video and the audio files from the camera, without realizing that they would lose their linking. Therefore, I had to match every audio clip to a video clip by listening them through which wasted hours of useful working time.

When making a rough cut of the film, I found out that I had forgotten to shoot an intersection between two scenes and could not cut them together. I had to improvise and ended up adding a sky shot in between the two scenes. The best way would have been to shoot the intersection entirely but I chose the easier way.

5.6 Post production of "I remember you"

I worked across the production and post production phases because there was a wait of a few months in between the first and the last day of filming. I edited the first part we filmed, made special effects, audio and also some graphic design for it, so that after filming the last part I would only have to cut it and finalize the audio. I had a much more efficient workflow than in post production for "Täällä Vartioin Minä". I categorized everything from video files to audio and image files and created folders for different editing projects.

The video footage I shot was looking great in the camera already and I was very excited about the whole production. There were no major issues in the footage, except for some camera angles being a little difficult to match together. As an example, in some shots there were cars in the background and in the next shot the car would have disappeared, since in reality time had elapsed between the two shots. I could, however, remove these background problems relatively easily. On the first day we had filmed from the morning to the late afternoon when sun was already going down, and so I had to increase the sensitivity of the camera sensor. Subsequently I had to deal with the video noise in post production. Luckily, I could use efficient noise removal plug-in which improved the quality of the noisy shots.

After the last filming day in February, when I opened the new material in the editing software, I could finish editing it quickly. The sound was more troublesome task, since I had recorded it without headphones. I realized in sound editing, that wind was sometimes blowing really noticeably into the microphone, covering almost all other audio. Also on the audio track from the first day of filming, I could hear indistinct chattering coming from behind the camera, when some actors were talking. Since we were filming right next to a road, the ambient noise of cars was sometimes a bit heavy for the microphone. However, I had filmed enough material that I could move the audio around and get rid of most of the problems.

6 The good and the bad

6.1 The short films

So far, I have made three real short films, two of which are dealt with in this Thesis. Each one has had clearly good and bad sides. The customer project has more good than bad sides like it should, since it was collaboration between all parties involved. But there is no such thing as a perfect audio visual production.

Täällä Vartioin Minä

Even though my first official short film *Täällä Vartioin Minä* was not an uttermost failure, it was a forlorn attempt to make a professional looking short film. The result varies from acceptable to embarrassing and as a whole it is not something I want to list as an accomplishment. I had to kick myself up every morning to continue and not just to give up in the middle of the production. I occasionally wished I would never have started the whole production because I had realized that the outcome would not look professional, some of the actors could not perform as I was hoping for and the production was hemorrhaging money.

Due to the tight schedule, I worked an average of twelve hours a day for eight days straight, with a total of ten filming days, which nearly caused a burnout. I did not make a budget for the film which resulted in excessive use of money towards the end. I spent a really long time in the post production phase because I did not have an efficient workflow. I also had to correct a lot of mistakes that were caused by poor planning and not enough checking. Almost the whole filming period was sunny and warm which helped us a lot. However, if there was even a few more days of rain or really cloudy, the production would have gone haywire. There were no fallbacks and too much was taken for granted, luckily nothing devastating happened and the production could be finished.

Despite all the problems and the essentially poor outcome of the short film, I am glad I went through with it. There are a few shots that I am even proud of, but most of all it was the learning experience that made all the hassle worth it. What I learned during

the whole production – from pre-production all the way to the end of post production – could not have been taught at Media Engineering degree at any point; the process as a whole is simply too laborious to be taught on a course or even several courses. As a learning method, I wrote down what could have been done better and I could already implement the findings when I started the production of “I remember you”.

I remember you

The biggest learning experience in production for “I remember you” was not so much about technical aspects but more about organizing, which is also a key factor when carrying out a production of any video. If the technical aspects are in control, the production can still suffer a lot from poor planning. Customers expect to get their videos on the agreed schedule. Keeping up to schedule is, therefore, a major concern, and delivering a video to a customer within a deadline is something a professional video maker should be able to achieve.

The tight schedule also reflected on the end result; some acting was not entirely believable, audio track suffers from occasional noises that should not be there such as strong wind. Some of the shots also do not match completely with the surrounding ones because there was too much time between filming them, and the lighting conditions were different. A few extras were used, but because I was in charge and responsible of everything, I was too busy with the production to properly welcome the extras and to explain them what was going on and when. This might have left the extras disappointed, since the environment probably felt a little tense which was not by all means the purpose.

Overall “I remember you” was close to a professional short film while “Täällä Vartioidin Minä” was light years away from any professionalism. The cinematography in “I remember you” is clear and the shots were planned thoroughly. The use of a D-SLR camera was a good choice for the production, and any problems related in filming with D-SLR cameras – such as the rolling shutter – was not apparent in the final result. The use of D-SLR camera also allowed for a better resolution, and while “Täällä Vartioidin Minä” was more aimed at a closed circulation on a DVD, “I remember you” is a high definition video aimed at a wide Internet release.

6.2 Company video

If I had not made the short films in the past, I would not have had the courage to take on a customer project with multiple parties involved. The collaboration also has its limitations and problems. During the pre-production, production and post production the biggest issues were related to communication which gets harder in respect of the amount of different parties involved.

Usually the assumption is that everybody knows the basics of the agenda, and once something new is established, everyone should make out the current situation. This was not the case as, for example, the e-mails sent after the first collaborative meeting never reached me due to wrong e-mail address that I had not even given. Even before establishing the actual case, which was to be documented and compiled into a video for ADC, there was supposed to be another case to document, but once we started to gather information about it from the person in charge of the location, we found out that the person was not in country for several months, and had to abandon the case moving to another one.

Some sort of schedule should be established from the start as a lot can happen in one week in production but not in the meetings. By this I mean that if a meeting is held once every week and some party does not handle their task during the week in between, others' work is also on hold. It is also easy to postpone a task thinking that it can be handled in the next meeting or the meeting after that. As a result three weeks have quickly gone and nothing has happened.

The way the project was carried out is not a proper professional video production. I was to create a script, gather equipment, shoot, edit and deliver the video. As I have found out in my earlier productions, one person in charge of everything decreases the quality of the production as a whole. In most professional video production one department is in charge of writing a script, others carry out all the filming and someone else handles the editing. This is why professional video production should be a team effort on the production side; everyone has expertise in something but nobody has expertise in everything.

Still the project was successful, since the back and forth interaction between Metropolia and ADC was inclusive. It was brought to everyone's attention what can and cannot be done and everyone accepted it. Then the project was carried out accordingly.

6.3 Distribution and feedback

The customer project for ADC was planned to be delivered as a digital video file. This would allow the playback quality of the video to be higher than if the video was provided on a DVD. The digital video file could also be transferred through the Internet fast at any time.

"Täällä Vartioin Minä" was distributed on a DVD only to the people involved with the production. I was earlier planning for an Internet release but due to the eventual misfire in production value, the short film was not to be released publicly any time soon, if ever.

I planned a high definition Internet release for "I remember you" but before public distribution I wanted to see if it would be screened at any short film festivals nationally and possibly internationally. When writing this Thesis, the selections for any short film festivals "I remember you" had been sent to, were not yet made.

I find it very important for my learning to get uncensored feedback when I make a production, or essentially anything I need to learn from. People are sometimes blind for their own mistakes and if a neutral party points out the possible flaws, they can be reassessed and next time the problems can be avoided. It is professional's duty to accept feedback so improvements can be made. Anonym feedback that is mostly a compilation of vulgar bursts of hate and unreasoned morbid spreads of literary garbage does not help anyone to improve. On the contrary, it might discourage a person from ever trying again. This kind of feedback should be merely disregarded. I have mostly gotten constructive criticism concerning the productions I have carried out, which has been essentially the cornerstone of my learning.

7 Conclusions

The purpose of my Thesis was to go through different techniques of carrying out a video production from the beginning to the very end, gradually by assessing three real life productions; one customer based and two personal short film productions. The goal was to establish a workflow, which makes any video production more coherent and robust to mistakes. The short films were produced between summer 2011 and spring 2012, while the customer project was carried out at the end of 2011 and continued to the summer 2012. The customer project required high quality video in terms of production value. For the short films the objective was the same, even though I was the only one deciding what the final quality is. In my Thesis I examined the steps required in all three productions, as well as what I have learned during the progress.

Production of a company video required high quality equipment as well as thorough planning. For the customer project I interacted with Art and Design City Helsinki to get a good script and a plan before filming the actual project. The production needed to showcase an online platform that can be used by multiple departments, allowing end users to interact with each other and solve problems concerning product development and visibility of companies to potential customers. The script was constructed so that the video would present all the key factors the customer had in mind.

While it is possible for one person to make a professional video production, it is not recommended. Professional productions are team efforts, where all different tasks are distributed to the personnel who specialize on specific tasks. If anything, it is hard for one person to keep up with the schedule, if there is nobody else to share the workload with. The video production for ADC did not have a tight schedule, since the release of the video was planned to be almost one year after the project originally started in the end of 2011. The experience I have gathered at school does not cover nearly enough to carry out a project this big, but on the other hand, without the courses I probably never would have agreed on the challenge in the first place. Media engineering degree has provided a strong base knowledge for audio visual productions.

During my personal short film productions I have learned what it is like to carry out a production with one man personnel. It absorbs all the time and resources, or conversely takes a really long time to be finished. Sometimes both. Working alone can cause a burnout, which I almost experienced while in production for my first real short film "Täällä Vartioin Minä". The production was far too demanding for my level of expertise, and hence the outcome was poor. All the work was not in vain, since I finished the production and always made notes of what could be improved in the future. My next short film "I remember you" was a lot less troublesome and far more professional production. One thing left to improve for future is scheduling, since I am constantly too optimistic about what can be achieved in a certain amount of time. Because I am passionate about video productions, it has been possible for me to dedicate all of my time and resources for the productions, until they are ready.

Overall, all these productions have made me more of a professional. The best way for me to learn has been to combine what I have learned at school to real life situations, which force me to learn in practice and find answers to the problems that occur. The most important lesson I have learned, however, is to seek for assistance and work with people so the faults of one person can be substituted by the abilities of someone else, and the end result can be more professional than what it ever could be with only one man team.

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Kohti parempaa kaupunkikokemusta Living Lab menetelmin.

Video alkaa grafiikalla ja Living Lab teorian esittelyllä. Kertojaääni aloittaa:

”Living Lab on käyttäjälähtöinen, avoin innovaatioekosysteemi, joka toimii usein kaupunki- tai aluetasolla yhdistämällä tutkimuksessa ja innovoinnissa samanaikaisesti julkisen ja yksityisen sektorin ihmiset.”

Näytetään Living Lab kaavio (User-driven model) grafiikkana

”Living lab työalusta kerää yhteen eri osapuolet: Mahdollistajat, Kehittäjät, Hyödyntäjät ja Käyttäjät.”

EXT. PASILAN ASEMA

Kuvaa aseman ympäriltä, ihmisistä ja arkkitehtuurista. Kertojaääni jatkaa.

”Otetaan esimerkiksi Pasilan asema: Aseman läpi virtaa päivittäin yli 50 000 matkustajaa, mutta kuinka moni heistä tietää mitä palveluita asemalla on tarjota?

Nopea väläys Haaga-Helian oppilaitoksesta.

”Ammattikorkeakoulu Haaga-Helia päättää tutkia asemaa ja tutkimuksen kohteena on näin ollen Pasilan aseman palveluiden tuominen asiakkaiden tietoisuuteen.”

Kuvaan otetaan eri osapuolet

”Meillä on nyt case, jossa mahdollistajana toimii Helsingin kaupunki, kehittäjänä Haaga-Helia, hyödyntäjinä Senaatti-kiinteistöt sekä Pasilan asema, ja käyttäjinä kaikkein tärkein ryhmä: aseman käyttäjät.”

Työkalun käytön kuvaamista

”Työkalu on mukana alkumetreiltä saakka, koska tutkimusongelma tuodaan siellä ensimmäisenä esiin. Sovittaessa vaikkapa palavereja eri osapuolten kesken, asioita voidaan nostaa pöydälle työkalussa jo ennen varsinaisen palaverin ajankohtaa.”

Palataan takaisin Pasilan asemalle

”Jotta tiedetään, miten palveluita voidaan parantaa, tarvitaan mielipiteitä ja ideoita käyttäjiltä. Tutkijat järjestävät kyselyitä ja Haaga-Helia järjestää Pasilapäivän, jonka

aikana kerätään näiltä satunnaisilta aseman käyttäjiltä mielipiteitä ja ideoita Pasilan aseman palveluiden parantamiseen.”

Tutkija pudottaa ison kasan paperia sylistään pöydälle ja alkaa syöttää tietoja alustaan ”Päivän saldo on kaikenkattava, ja yhteenvedon jälkeen tulokset syötetään LivingLab-alustaan. Alustaan voi lisätä kaikenlaista sisältöä, jotta tulokset ovat helpommin ja kattavammin ymmärrettävissä. Tiedon jakamista voidaan myös helposti hallita luomalla projektiin eri ryhmiä. Tämä auttaa vaikkapa yrityssalaisuuksia koskevien tietojen rajoittamisessa vain välttämättömille henkilöille. Vaikka mukana on useita eri käyttäjäryhmiä, tarvittava tieto on saatavilla samasta paikasta – tietoa ei huku matkalla eri sähköpostiosoitteista toiseen eikä käyttäjien tarvitse miettiä, keneltä mitäkin tietoa pitäisi kysellä.”

Ihmisiä eri ilmeillä näyttäen selkeästi mielipiteensä

”Koska olemme kaikki erilaisia, meillä on eri näkemyksiä ja mielipiteitä; jatkon kannalta onkin tärkeää, että tuloksia voidaan kommentoida suoraan alustassa ja turhat esitykset voidaan karsia joukosta tuoreeltaan. Tähän prosessiin osallistuvat myös loppukäyttäjät, mikä tekee LivingLab-alustasta tehokkaan vaikuttamisen välineen. Eri tietojen alkuperäiset lähteet ovat myös koko ajan näkyvillä, joten faktat on helppo tarkistaa. Projektiin voi lisätä tavoitteita ja ohjeita, jotka kannustavat osapuolia yhteiseen, parempaan lopputulokseen.”

Näytetään alustan käyttöä ja idean valinta

”Ideoista otetaan nyt esiin järkevimmät ja niitä sovelletaan hyödyntäjien kanssa käytäntöön.”

Näytetään projektin lopputulos

”Lopputuloksena syntyy ratkaisu, joka päihittää ongelman ja tarjoaa Pasilan aseman matkustajille parempaa ja näkyvämpää palvelua. Tästä LivingLab-työkalussa on kyse: ongelmien ratkomisesta yhdessä.”