THEORY – UNIT 62 ASSIGNMENT

By Alex Parker

<u>Short films</u>

- A short film is a video that is described as a film that is about 5 minutes to a maximum of 40 minutes. This all depends on what the video/ film is about. These short films are made and broadcasted either local, national or even international, depending on who likes them. These films will made by independent filmmakers for non profit. With a low budget or no budget at all. They are usually funded by film grants, non profit organizations, sponsor, or personal funds.
- A short film/ video can be viewed on either TV or they can be shown on the internet through YouTube. These videos can range from what people do in their life's, or some action packed animated shorts. Short films aren't as popular because directors and cast who take on creating a short film can create a story that focuses on a difficult topic. Animated short films are very popular.
- Short films have started to get popular this is because they can be found easily on the internet and because filming and editing software / equipment is now quite cheap when compared with their cost 5-6 years ago. Therefore they are easier to produce and to create them. This is down to the fact that people can see it quickly through a video online.
- No one really knows how long a short film I should be, this can differ from country to country. The internet movie database describes any film less than 45 minutes as a short film, this is what they are trying to do, in all over the internet. A short film is compared with a full length film, so they can see the difference between the stories.
- Also short films are a good way for new directors to get well known and to also get recognized in the media world



Promotional Material

- People use promotional material to promote products within education, business, organisations, Government, etc..
- Promotional material is any combination of media that provides people with descriptive information about any new or could be happening within learning activity. These promo materials can include be anything from; brochures, email announcements, website and direct mail, leaflets, etc. Promotional material can be either for; marketing, sales, advertising.
- Promoters use internet videos, special events, endorsements, and newspapers to advertise their product. Many times people will purchase of a product there is an incentive like discounts, free items, or a contest. This is to increase the sales of a given product.
- Video is used across many platforms in order to advertise and promote products. The most common of which is TV advertisements but nowadays internet adverts across sites like YouTube has become more popular.

THE FOLLOWING **PREVIEW** HAS BEEN APPROVED FOR **ALL AUDIENCES** BY THE MOTION PICTURE ASSOCIATION OF AMERICA

www.mpaa.org

www.filmratings.com

• Film trailers

- Film trailers are advertisements that are used to promote a film that will be eventually shown in a cinema in the future.
- Film trailers consist of video scenes that are taken from the actual film and are edited together in a certain way to get the target audience's attention. This can be very secretive and makes people so excited to see the film. These scenes are usually the more exciting or visually video clips appealing in the film. These videos can leave a cliff hanger at the end that then makes you want to see the film in the cinema .Many film trailers use voice overs for the of the movie and provide explain at bit about the film. But some films just use some soundtrack, then instantly they know about the film. For example the Star Wars 7 The force awakens.
- The music or the soundtrack of a film trailer is important as the mood of the film can be interpreted. Usually the music used in the trailer is another piece of music that chosen as this can change the effect of the trailer.
- Many trailers are mostly seen on the TV, as they can get a lot of viewers this way. But in recent years advertisers have turned to video sites such as YouTube for additional promotion, this is because they are making sure people can re-watch this .Then they can get a lot more viewers online.
- Film trailers will show you some information, like who is going to star in the film, what the age restrictions are, when It will come out in the cinema, what you can watch it in, e.g. 2D, 3D, Imax.





<u>User-Generated Content (UGC)</u>

- User-Generated Content (UGC) refers to content that has been produced by end users, (The public).
- Videos created by users have increased over the past few years with multiple internet sites with the viewing and uploading of these videos getting bigger. User videos are often moderated/ looked at for copyrighted content or offensive language / material, they can then see weather they are suitable for the age rating. A lot of UGC has been relating its products so people can create games or software.
- User-generated content can also be referred as consumer-generated media (CGM) or conversational media (CM).
- User-generated content and upload sites will follow a set of certain guidelines which will protect some copyrighted content. These make sure that content and videos that are uploaded by the public don't contain any illegal material from the original maker of this material. Users that don't or won't follow some of the sites guidelines can face a permanent ban from that site.
- There are things such as player-generated content is when a player goes of offline, online games will record some of the gameplay of the game. Then later on they will edit some of the files and then add some different effect, then they will upload the final product online. Videos such as these have become especially popular with more and more games being focused on online game play. These are usually found on YouTube as this will allow things like this to be published.



Viral Marketing

- Viral marketing is the use of the internet to advertise a brand or product, this can be seen virally (around the world).
- Viral marketing makes use of the word of mouth, where by news of a product or brand is spread over the internet by users of forums, social networking sites and instant messaging programs. These are both good ways of getting items viral and to do this quick.
- Viral promotions may be in video clips, Flash games that are interactive, images, or even text messages. This is all in what the marketing director decides on how they want there product to do viral.
- Viral marketing is 87% is done through video clips which are at a max of about 3 minutes, then from this people watch it over and over again, then they share the video through social media to get other people interested.
- There are lots of websites that can teach you the ways and secret of getting online videos viral. They do it step by step. Then you can know about how to get your videos viral.





<u>Advertising</u>

- Advertising with video clips are one of the most popular sources of advertising this can be shown through the following; television, internet, cinema, home cinema, DVD's and games.
- Television video adverts have been shown advertisement breaks in regular programming every 20 minutes or so. TV adverts may also show a few clips about a new series that they are bringing out.
- Big companies will spend a huge amount of money through advertising their products. About £1.6 billion is spent by companies each year and all of this is to get their advertisement and their campaign out there .
- Advertising on the internet has grown a lot over the years with video advertising being just one of the ways in which companies advertise on the internet. On a website called YouTube you can watch the main video. But before you can you will most likely to watch a advert before hand, these can be from about 30 seconds to about 15 mins.
- Another form of advertisement shown on television can be infomercials which are usually last about 5 minutes long. These
 adverts can either; describe, display, and often demonstrate products and with their different feature. They are made and
 designed in a certain way this is to make viewers want to buy the product almost immediately through a call to them or through a
 online purchase, or even go out to a shop to buy it.



Virtual reality tours (VRT)

- Virtual reality tours are simulations which either the user controls or that tour is automated completely and goes from start to finish without user input. This can be good if you want to have a preview of a place so you can see what it is like before going or spending money. Virtual reality tours have also got some effects other than video, like sound effects, music, narration and text. This can always be added on later.
- Virtual reality tours are useful for universities or houses people might want to visit. This is because they allow any user of that
 site to look and preview the place without needing to spend money on travel. This can also be good as it will stop people from
 wasting time for the housing seller and they can then sell it on to people that what to buy the property.
- A video tour will consists of a start to finish video which will showcase a location from a camera-man in his POV (Points Of View).
 Video tours are commonly taken as a walking speed. But a interactive tour is where there is a number of interlinked videos or camera stills which showcase each part of the location. The user can choose whichever he / she wishes to view rather than having to watch the entirety of the tour, which is what a lot of people will do.
- Virtual reality tours are becoming more advanced software, on how they can create them. An example of such software is PanaVue and imageAssembler which will allow the user to create 360 panoramas (views) used in the creation of virtual reality tours. You can see 360 panoramas on YouTube, which have been taken with specialist cameras.

• <u>Games</u>

- Video games are electronic games which function by providing a interface to a user which then they can display the content on a video screen. Video games have many different platforms that people can play on. Computer games can be played on a lot of things, but the most popular is; PC, Xbox one, Xbox 360, PS4 and PS3 these are played by using a Television and a console platform or a handheld console.
- Video games typically allow the player to interact with the game by using peripherals such as a keyboard, controller, mouse, joystick, direction pads, touch screens and buttons. There are many of them, but these are just a few.
- Video games typically make use of sound as music for the game, sound effects when the user interacts with a particular part of the game or as audio instructions. The final two can be used as another form of human interaction.







• <u>MP4</u>

- MP4 is a digital file format that is mainly used to store video and audio files, but you can use the other feature which is to store subtitles and still images. Like most other formats, it will allow some streaming over the Internet. The only official filename for MP4 is MPEG-4 Part 14, but this is still mainly displayed as .MP4. The other file formats are listed; .m4a and .m4p. M4A (will be just for audio). This file format is compressed by using lossy AAC encoding. M4P is a format that needs to be protected. This will then uses some DRM (Digital Rights Management) technology to restrict some/ most / all copying. MPEG-4 Part 14 will use ISO/IEC 14496-14:2003)this is a specified standard with part of MPEG-4.
- Most kinds of the data can be embedded in MPEG-4 Part 14 files through some private streams, MPEG-4 Part 10 (H.264) and MPEG-4 Part 2 was used for video. The other compression formats are used less; MPEG-2 and MPEG-1. MPEG-4 Part 3 contained some audio objects, such as Audio Lossless Coding (ALS), Scalable Lossless Coding (SLS), MP3. At one point there was Apple Lossless.
- MP4 is mainly used for TV and movies so there are Subtitles, and still images. MP4 files do contain metadata which is defined by the format standard, it can also contain something called a Extensible Metadata Platform (XMP) which is a type of metadata.



• <u>AVI</u>

- AVI stands for Audio Video Interleaved, this is a multimedia container which was created by Microsoft in November 1922 for there video for windows software. AVI files can contain audio and video data in a file. As it is a container it will allow a synchronised audio-with-video playback feature. AVI files support multiple streaming audio and video at one time, but these features are not used as much as windows intended it to. AVI files also use the file format extensions developed by the Matrox OpenDML group in February 1996. This file is supported by Microsoft, but unofficially it is called "AVI 2.0". This AVI file format is mainly used for watching videos on a PC.
- AVI has some limitations as it was created in the 90's when the computers were more basic, these limitations where, That AVI does not provide a standardized way to encode its aspect ratio, this meant that people would have had to resize there media browser constantly. There are a few competing approaches to a time code in AVI files, which can affect usage of the format in film and television production, although it is widely used. There are a few more, but I don't want to list them all.



• <u>FLV</u>

- FLV stands for Flash Live Video, thisa container file format that is used to deliver video over the Internet using Adobe Flash Player version 6. Flash Video content is embedded within SWF files. The audio and video data with FLV files are encoded in the same a SWF files. The F4V file format is based on the ISO media file format and is starting with Flash Player 9. Both formats are supported in Adobe Flash Player and Adobe Systems. FLV was originally developed by Macromedia.
- Flash Video is the standard for web-based video. The main users of it will include YouTube, Hulu, VEVO, Any many more. Flash Video FLV file contain material encoded with codecs using video compression formats. The most recent public releases of Flash Player will also support H.264 video and HE-AAC audio. All of these compression formats are restricted by patents, but you can get them if you ask Adobe
- Flash Video is viewable on most operating systems via the Adobe Flash Player and web browser plugin, But Apple's iOS devices do not support the Flash Player plugin and so require other delivery methods such as provided by the Adobe Flash Media Server. But they can still get FLV on their PC



• <u>SWF</u>

- SWF is an abbreviation for small web format, originally called ShockWave Flash. This is a Adobe Flash file format that is used for multimedia, vector graphics and ActionScript. This was originally owned by FutureWave Software, but then to Macromedia bought it, and then coming under the control of Adobe when they bought everything of macromedia, SWF files can contain animations or interactivity and function. It may also be used for programs, commonly browser games, using its own ActionScript.
- SWF is designed for efficient delivery over the web. SWF files can be viewed in a web browser using the Flash plugin. WinZip, WinRAR, and other Windows utilities can be used to open them.
- SWF call be involved with videos as it is mainly for games and animations, but people have changed the file codes so that you can use it for videos that will open in the internet browser.



• <u>3GP</u>

- 3GP is a multimedia container format defined by the Third Generation Partnership Project (3GPP) for 3G multimedia services. It is
 used on 3G mobile phones but can also be played on some 2G and 4G phones. 3G2 is a multimedia container format 3GPP2 for
 CDMA2000 multimedia services. It is very similar to the 3GP file format, but has some extensions and limitations in comparison
 to 3GP.
- The 3GP format was developed to make file sizes smaller so that they would use less bandwidth, making it easier to stream video and music onto mobile phones. It is important to note that you do not need a 3G phone to view files with the .3gp extension. Files that are in 3GP format can also be viewed on a personal computer, although the quality of the same file in an MP4 format may be better.



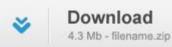


video sent by server video in buffer currently playing Progressive Download

<u>Streaming methods</u>

- Downloading is when you get a file, music clip, video from the internet or a computer server. From this you can watch, read or listen to the file as it would have been locally stored to wherever you saved it, if you can't find where you downloaded it to, then you can go into the systems download file and it will be in there somewhere. When downloading items there are different speeds depending on what the space of the file is like, if you had a film or a game it would take a considerable amount of time from a document or a 30 second clip. You can download videos legally through stores like; iTunes, Google Play or you can download it illegally through torrents or pirated film websites. If you have a file that you want to share or edit, without anyone knowing then, you can use sites and services like; Dropbox, OneDrive, Megashare.
- Progressive downloading is a type of transfer of media files from a server to a client. Mainly using the HTTP protocol when
 initiated from a computer, this can make it safer. The user of the computer may start to watch a film or play a game before the
 media has been fully downloaded and is complete. The person who owns that file can state that at a certain percent you can do
 this. You need to make sure that you are connected to the internet whilst watching it, as if you don't the film or video won't be
 available, also you might only get a part way through as it hasn't been fully downloaded.
- Streaming video is content that is sent in a compressed form over the Internet and then this is displayed by the viewer in real time. Streaming videos or streaming media, the Web user does not have to wait for the media or video to be fully downloaded. The media is sent in a continuous stream of data and then it is played as it arrives. The user needs a *player*, which will allow this to happen. A player can be either be integrated as a part of a browser or downloaded straight from the software maker's Web site. You can watch a live feed of people playing games on a website called twitch.tv







Data Transfer Rate (DTR)

- Data transfer rate is the average of net bit rate that is delivered, In the case of file transfer, the data transfer rate goes with the file transfer rate. The file transfer rate in bit/s. The data transfer rate (DTR) is the amount of digital data that is moved from one place to another in a given time or in a period.
- Videos are just like images, they will come in all varieties of file sizes and data info. This all depends on data that is it stored inside. This is all down to the following; the duration of a the video, the quality of the video weather it is normal or HD, and the file format of the video some of these are bigger sizes than another.
- The resolution of the media doesn't change the data transfer rate too much. The display resolution of a digital television or display device, is the number of distinct pixels in each dimension that will be displayed. This is usually set as width × height, with the units in pixels. For example is you had a width of 1024 pixels and a height of 768 pixels, it would be displayed as 1024X768. This is the average of height and width of a 24 inch screen. Video can be from about 480 to about 1080p which is SD to HD. You can get things in 4K nowadays.

Aspect Ratio

- Aspect ratio of an image describes the size between its width and height. It is two numbers separated by a colon, E.g. 16:9. No
 matter how big or small the image is, if the width is the x units of a length and the height is measured using this same length unit,
 the height will be measured to be y units. It is set out like; X:Y.
- 4:3 is also known as 1.33.1 as this is the old standard for TV's, but as technology has advanced the 4:3 ratio has changed. Most televisions and computer monitors have an aspect ratio of 16:9, which offers a perfect fit for high definition television shows. However, movies are usually filmed with a ratio of 21:9, which will result in black bars at the top and bottom of the picture when it is displayed on the average TV. This can be a big problem for people who watch a lot of films as they will notice them more. To fix this, some manufacturers are producing televisions with a 21:9 aspect ratio.

Aspect Ratio		Uses	TVs	
4:3	1.33:1	Standard Channels	Old TVs	
16:9	1.77:1	HD Channels	The majority of HDTVs	
21:9	2.35:1	Most movies	Very few TVs	

Computer Cor		4:3 V / Video mputer plays	35mm Film DSLR Came Smartphon	eras	16:10 Widescreen Computer Displays Smartphones
16:9 HDTV Widescreen SDTV Smartphones		1.85:1 Cinema Film (US)		2.35:1 Cinemascope	



Media players

- Adobe Flash Player is a free piece of software that was created on the Adobe Flash platform, this was made for viewing multimedia, using Internet applications, and streaming video and audio. Flash Players can run from a web browser as a browser plug-in or on supported mobile devices. Flash Player was created by Macromedia but was bought by adobe and then changed and updated it. Macromedia published and released it in 1996. Flash Player has been developed for games, animations, and web pages. Adobe has made sure that there new software stays up to date with everything new. Flash Player can be downloaded for free and its plug-in version is available for every major web browser.
- QuickTime is a framework developed by Apple, capable of handling various formats of digital video, picture, sound, panoramic images, and with lots of interactive features. QuickTime is available for Windows Vista and upwards, as well as Mac OS X Leopard and upwards.
 QuickTime X, is currently available on Mac OS X Snow Leopard and is newer features. It is a multimedia container file that contains one or more tracks, each of which stores a particular type of data. Each track either contains a digitally encoded media stream or a data reference to the media stream located in another file. The separation of the track means that QuickTime is particularly suited for editing, as it is capable of importing and editing in place.
- Windows media Player (WMP) is a media player and media library application that was developed by Microsoft and is used for playing audio, video and viewing images, this is on the computers with Microsoft Windows XP upwards. Editions of Windows Media Player were also released for Mac OS, Mac OS X and Solaris but development of these has since been discontinued. As Mac uses the quick time player. WMP also allows people to rip music from compact discs, then you can burn the disk so you have playlists such as an MP₃ CD, which will synchronize the content with a MP₃ player or other mobile devices.

• <u>E-Learning</u>

- E-learning is electronic learning that is done on a PC and not in a traditional classroom, one of the biggest sites is http://www.bbc.co.uk/schools/gcsebitesize/. This way of teaching can be seen good and bad.
- Advantages One of the best advantages is that you can do it 24/7 anywhere, plus it can be discreet. It is also cost effective and is
 also very helpful with telling you what it should be doing when you log in. The main disadvantage is that it can be seen as not a
 grade or qualification, this can be bad as people nowadays only want GCSE's and qualifications.
- On BBC Bitesize you can watch some videos before you answer some questions, this is a good way of learning. These videos are usually interactive, therefore they can have a hands on experience with the work, therefore making it easier for them to learn.
- A great tool in E-learning is screen-casting, this is where the teacher can see what you are doing at that time. This is where a
 teacher can develop a video example of the subject that includes audio narration and examples, this will be on the students
 notices when they go on. They are useful when creating tutorials for demonstrating and teaching some of the relevant software
 features.





<u>World Wide Web</u>

- The world wide web is a big platform that is used by about 2.4billion people on a daily basis, the world wide web was first created by Tim Berners-Lee in 1989, this was so people in the future could use it as a way of exploring the web. The internet is made up of web pages which can hold on to a lot of things, like; text, videos, images, links, etc. Most people will use the web for services like YouTube where they can stream videos or listen to music.
- A web browser is a piece of software that a user can use to receive the data on the World Wide Web. Using a web browser the
 user can view text, images, videos, and other multimedia elements. Sites like YouTube use the HTML code to add and make
 videos interactive, which any user can interact with the video this is usually done by clicking a play button.
- There are many site on the internet that just do things like streaming, viewing, downloading and uploading of videos. Examples of these sites include; YouTube, Megavideo, vevo, Metacafe & Google Video.



<u>Email attachments</u>

- Email is a service that lets you send messages, pictures, documents, videos to people all around the world at any place, without any charge. The full name is Electronic-mail but people call it email. It was first initialized as a text based message but then as the technology has advanced you can send other multimedia elements like videos.
- As email has been getting bigger they have had to add some restrictions to limit the size of E-mail attachments so that the work wouldn't overload any servers. Some E-mail companies started to add their own dedicated servers for the exchange of data via E-mail with some companies upping the limit to 200mb, 1gb or even unlimited.
- From 1996 people where sending more emails than normal post mail, this was because it had become so popular from the first message sent by Ray Tomlinson in 1971 which said "hello world".



• <u>DVD's</u>

- A digital versatile disc or digital video disc (DVD), is a type of optical disk technology that is similar to the CD-ROM. A DVD holds a
 minimum of 4.7GBof data, enough for a full-length movie, which is about 1hr plus. DVDs are commonly used as a digital kind of
 movies and other multimedia presentations that combine sound with graphics. Like a video
- DVDs supports the disk of a capacity of from 4.7GB to 17GB and access rates of 600KBps to 1.3 MBps. One of the best features of DVD drives is that they are backward-compatible with CD-ROMs, meaning they can play old CD-ROMs, CD-I disks, and video CDs, as well as new DVD-ROMs. Newer DVD players can also read CD-R disks.
- DVD's can hold every kind of data, but they are mainly used for videos and films. DVD's can be used for a storage for e-learning where people can learn from them.



• <u>Kiosks</u>

- There are two main types of kiosk; Interactive Kiosks and Web Kiosks. Interactive kiosks are often use video as a platform for instructions or have a interactive map. Many kiosks will have touch screens while others might have a set-up similar to a computer with a keyboard and mouse. They come in all different types.
- Interactive kiosks are generally found at a shopping centre which will give a guide to the user of where everything is, this can also give some directions to the shops they want to go to. They are also found in places like; airports, hotel lobbies, train stations, etc. There are a few problems such as they are expensive when they break down, it costs money to maintain and administer. They do run on power so any cuts in power costs money.
- Interactive kiosks are computers which have a specialist made interface which only does the task that is meant for the kiosk. This means the user will only have access to what is necessary and not any other information .
- The image to the right shows the difference between the touch screen kiosk, the keyboard and mouse kiosk and a kiosk with a leaning pad on so you can rest a bit whilst on it.



Presentations

- Presentations are a way of showing and explaining the content of a topic to an audience or learner. This is what teachers use in there lessons to interact with there students. A popular presentation software is Microsoft PowerPoint.
- Video is useful when creating presentations as they can be examples and they show off work that has already completed.
 They can also be used to show problems during a presentation and how the presenter plans to solve it.
- You can make a presentation suitable for e-learning as you as a teacher could write down some questions or some links that you want them to visit or answer, then the student could do the task and send it back to the teacher to mark.



Mobile devices

- Mobile devices is a hand-held communication device that lets you make and receive phone calls or text messages. They will also let you use the internet and will let you access social media online wherever you have service.
- Mobile devices make use of a display screen with a keyboard and or touch screen technology. As well as being able to
 communicate with others mobile phones also allow the user to have access to the web and view FLV videos but also store all
 kinds of video on the phone itself, the main form of video file formats are the following; FLV, AVI, M4V, MOV, WMV, SWF.
- In addition to viewing video mobile phones can also be used to capture still and moving images using a camera. The advantage
 of a mobile phone over other similar devices, is that you can access the information all over the internet, you can also go on to a
 college website and search for some e-books to help.



Digital Video Capture

Digital Video Capture is the way of converting analog video signals, such as those generated by a video camera, into a digital format that can then store the digital video on a storage device. Video capture from analog devices requires a special video capture card that converts the analog signals into digital form and compresses the data. There are also digital video devices that can capture images and transfer them to a computer.

The video capture goes through some steps. First the analog signal is turned to digital by an analog-to-digital converter to produce a raw data. The second step is he chrominance and is changed to produce colour for the video data. Then the data may be modified so as to adjust brightness, contrast, saturation and hue. Finally, the data is transformed by a colour space converter to generate data with several layers on it.



<u>Compression (lossy/ lossless)</u>

- Lossless video is a raw file, so this will have some higher file sizes. Lossless compression is rarely used in video, as Lossy compression can work a lot more better with smaller file sizes with and doesn't have a bigger reduction of quality.
- Lossy Compression removes all the data that isn't needed from a video clip, leaving all of the data that will still give a good
 picture for a high quality video. Video compression is the difference between disk storage space, video quality, and the cost of
 hardware required to decompress the video in a quick time. However, if the video is over-compressed in a lossy method, visible
 things in quality can appear.



Low compression (high quality) JPEG



High compression (low quality) JPEG

<u>Digital rights management system</u>

- Digital rights management systems are software or contracts that can be added to or manufacturers, publishers, copyright holders and individuals which allow them to add copyright protection on.
- Digital content in new way to make it impossible for copyright holders to control the distribution of their property. It's not just music, but film, video games and any other media that can be digitized, so that it can't be passed around. Digital rights management (DRM), is any type of technology that aims to stop, or at least ease, the practice of piracy and copying.

