#### Social and ethical issues

Students must study and evaluate the social and ethical issues involved in the use of images, sound and presentations, for example, multimedia, slideshows, virtual reality, games. These may include:

## T82 - Intellectual property relating to the copying and modifying of text, images, sound and video (fair use policies) by Ken Moyer

Intellectual property is a right given to people who created something through innovation. Whoever received this right can treat their innovation like a property for a given period of time. Then during that time period, people cannot copy or use the innovation created by the right holder unless he allows it. In this essay, I would like to briefly explain the different kinds of intellectual properties, and then mention some social issues about intellectual property.

A copyright is an intellectual property that people are probably most familiar with. It is given to books, movies, music, paintings, photographs, software, or any artistic works. The owner of the copyright has the rights to control reproduction or adaption of such works for a certain time period.

A patent is an intellectual property given to a inventor who created some invention. It is given to new, useful, or sometimes even non-obvious inventions. The patent holder is given an exclusive right to commercially exploit the invention for a certain time period. This is typically 20 years but can vary due to the importance of the invention to the society.

A trademark is given to various business products or services. Businesses give their product or service a distinctive sign. This will distinguish the different products and service businesses create.

An industrial design right is given to industries. It protects the form of appearance, style or design of an industrial object for a given period of time. Examples are spare parts, furniture, and textiles. Other industries cannot copy the innovation of another industry unless they have an agreement or permission, which is very unlikely.

A trade secret is given to a secret. The secret is a non public information that is concerning the commercial practices, proprietary knowldege of a business, or public disclosre. This may sometimes be illegal, which is a very scary thought.

Now I would like to talk about the different social issues involved in this topic. The first one is about the economy. Giving intellectual property rights to someone is like making him a monopoly. A monopoly is created because noone can copy or create the product for a certain time period. Therefore the owner of the intellectual property rights has no competition in the business world. This means that the price can be altered as the owner wishes. Then a market failure occurs because price does not reflect the society's real price. This means that goods and services are not allocated efficiently. Consequently, some people say that intellectual properties are not good for the economy.

But some people disagree to this idea. Intellectual property rights creates more innovation because the innovation is protected by the rights. Then there will be more products in the market. This increases the standard of living of a country. Standard of living is number of choices a country can offer to their people. If more goods and services are out in the market, then people have higher standard of livings. A higher standard of living also means that the country's GDP is higher because they are directly proportional. Consequently, intellectual property can also be good for the economy. This is a big debate.

Copying information that has intellectual property rights is said to be illegal for stealing. But the official definition of theft is taking away the property, taking of away the owner's use of the property, or the destruction of the property. But if you copy an information, it does not take away the information away from the owner, it does not take away the owner's right to use the information, or it is not destroying the information. Therefore, some people believe that breaking the intellectual property rights should not be illegal because it is not theft.

# T83 - Copyright issues by Ronald Chu

Relating to the technological terminology, images, sounds, and presentations can be defined as multimedia, slideshows, virtual reality, games. Now, what is a copyright? It is a set of exclusive rights regulating the use of a particular expression of an idea or information. Simply put, it is a "right" to "copy" original works. The symbol for copyright is ©.

### How does the copyright for images, sounds, and presentations actually work?

Without copyrights for ISP (images, sounds, and presentations), people would be using them for their own websites and take full credit. There would be plagiarizing all over the place but no one would know where the original came from and if you were really copying anything or not. Copyright laws have helped website makers

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and other people with originals tremendously. To make sure that you are not breaking a copyright law and plagiarizing, you must site the source of where you got your "information" from and give credit to the original owner. There are a many guidelines for ISP copyrights. Here are some of them:

- 1. All copyright and licensing tags should be put on a line of their own.
- 2. Along with a tag, specify the source or copyright holder information. Provide as much detail as possible.
- 3. If an image is not licensed under a standard license, please specify what the actual license states.
- 4. If you tag an image as requiring attribution, please specify who needs to be attributed.
- 5. If multiple categories apply to an image, add all that apply.

There are many ethical and social issues concerning this. The ethical issues are concerning the problem of "who has the original" and "who has the right to copy." It is immoral to plagiarize and use other people's works and claiming that you are the original owner. The people responsible are the original owners and the people who use their "information" for their own benefit (regardless if they are plagiarizing or not). The same set of people is also accountable. The laws that apply are copyright laws. However, it is not really a "real law" that is used in courts. You can usually get away with copyright laws, unfortunately. There are not many alternative decisions. Usually, if you try to find "information," there is always a copyright so you have to source the site or wherever it came from. If you do not want to do that for some reason, then your only alternative choice is to not use that "information" or just make up your own. The consequence to this alternative decision is that you will not be able to get the "information" and if you make your own, it will probably be not as accountable and reliable.

The social issues concerned with this subject are similar to its ethical issues. This "technology"/"law" was formed probably about the same time when people began to use other people's "information." Copyright laws are also used in books, not only IPS. There are no stakeholders, which mean that there are no disadvantages or advantages either. I don't think there are any solutions to this problem except for just giving up. This affects people all around the world, including in our own country. Without IPS copyrights, we would not be where we are right now.

or

#### Copyright issues by Ronald Chu (Edited by Nitish Gautam)

Relating to the technological terminology, images, sounds, and presentations can be defined as multimedia, slideshows, virtual reality, games. Now, what is a copyright? It is a set of exclusive rights regulating the use of a particular expression of an idea or information. Simply put, it is a "right" to "copy" original works. The symbol for copyright is ©.

#### As stated in Wikipedia.org:

Copyright is a set of exclusive rights regulating the use of a particular expression of an idea or information. At its most general, it is literally "the right to copy" an original creation. In most cases, these rights are of limited duration. The symbol for copyright is ©, and in some jurisdictions may alternatively be written as either (c) or (C). Copyright may subsist in a wide range of creative, intellectual, or artistic forms or "works". These include poems, theses, plays, and other literary works, movies, choreographic works (dances, ballets, etc.), musical compositions, audio recordings, paintings, drawings, sculptures, photographs, software, radio and television broadcasts of live and other performances, and, in some jurisdictions, industrial designs. Designs or industrial designs may have separate or overlapping laws applied to them in some jurisdictions. Copyright is one of the laws covered by the umbrella term 'intellectual property'.

Copyright law covers only the form or manner in which ideas or information have been manifested, the "form of material expression". It is not designed or intended to cover the actual idea, concepts, facts, styles, or techniques which may be embodied in or represented by the copyright work. For example, the copyright which subsists in relation to a Mickey Mouse cartoon prohibits unauthorized parties from distributing copies of the cartoon or creating derivative works which copy or mimic Disney's particular anthropomorphic mouse, but does not prohibit the creation of artistic works about anthropomorphic mice in general, so long as they are sufficiently different to not be deemed imitative of the original. In some jurisdictions, copyright law provides scope for satirical or interpretive works which themselves may be copyrighted. Other laws may impose legal restrictions on reproduction or use where copyright does not - such as trademarks and patents.

Copyright laws are standardized through international conventions such as the Berne Convention in some countries and are required by international organizations such as European Union or World Trade Organization from their member states. (wikipedia.org)

How does the copyright for images, sounds, and presentations actually work?

Without copyrights for ISP (images, sounds, and presentations), people would be using them for their own websites and take full credit. They might earn money and use it to their own advantage without the author's

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permission. This would be very unfair to the author who actually made the content and should be getting money or the respect and credit for it. There would be plagiarizing all over the place but no one would know where the original came from and if you were really copying anything or not. It would be cheating in its own unique way. Copyright laws have helped website makers and other people with originals tremendously. To make sure that you are not breaking a copyright law and plagiarizing, you must site the source of where you got your "information" from and give credit to the original owner. There are a many guidelines for ISP copyrights. Here are some of them:

- 1. All copyright and licensing tags should be put on a line of their own.
- 2. Along with a tag, specify the source or copyright holder information. Provide as much detail as possible.
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There are many ethical and social issues concerning this. The ethical issues are concerning the problem of "who has the original" and "who has the right to copy." It is immoral to plagiarize and use other people's works and claiming that you are the original owner. Besides the fact of it being immoral, it is illegal in today's age to steal. The people responsible are the original owners and the people who use their "information" for their own benefit (regardless if they are plagiarizing or not). The same set of people is also accountable. The laws that apply are copyright laws. However, it is not really a "real law" that is used in courts. You can usually get away with copyright laws, unfortunately. There are not many alternative decisions. Usually, if you try to find "information," there is always a copyright so you have to source the site or wherever it came from. If you do not want to do that for some reason, then your only alternative choice is to not use that "information" or just make up your own. The consequence to this alternative decision is that you will not be able to get the "information" and if you make your own, it will probably be not as accountable and reliable.

Another very serious issue concerning copyright at the moment is about websites. Hot linking is also concerned as stealing. Hotlinking means to embed, or directly link to a file or image or music or any type of media from another website. A solution to this problem is that we give credit to the owner or ask permission before

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## T84 - Printed versus electronically published information by Romeo Wu

The most observable difference between print and electronic publishing is, obviously, their temporal qualities. While print-based media are grounded in physical space, their form consisting of solid elements based on wood pulp and plastics that can be 'owned' and held, the electronic media free publishing from the printing and object-based process. Digital media consist of a series of binary bits that fly through space at the speed of light, foregoing a complex computer-driven data encoding/decoding process at each end. While the decoded product, to the senses, may resemble a printed alternative in many ways, it is not materially or spatially-bound, and therefore challenges national regulations and established notions of intellectual 'property'.

The author-reader relationship in the electronic orb of computer networking takes on a completely different meaning to that existing in traditional print media. The digital media enable real-time dynamic updating and instant user feedback, the results of which can, in turn, contribute to shaping the product. This infers that the new system is largely relationship based, with user-friendly indexing features, communal features fostering the product towards achieving its maximum potential, while reflecting a variety of viewpoints. The process of print publishing restricts such rapid feedback and updated information delivery. Restrictive expenses of resources, too, act as a barrier against the production of printed revised editions until sufficient demand arises.

Socially and politically, though, the greatest difference between the disparate publishing processes is in relation to the accessibility of electronic media as a publishing outlet. User-friendly HTML editors and multimedia presentation software, in conjunction with the low costs associated with distributing information over networks effectively opens up the market to anyone who is driven to make a statement or provide information to the public, whether pertinent or otherwise.

Of course, this aspect also raises questions regarding the validity of information conveyed, though similar accusations could arguably be directed at many fringe print productions. Undeniably, though, the infinite benefits underlying a user-shaped environment far outweigh issues of academic legitimacy and the formation of a deceptive hyper-reality.

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## T85 - Health Issues Related to Virtual Reality by Akira Jackson

First of all virtual reality is a simulation that is created by computers including visual, sound and sensory in formations. This information often comes through computer screens, and headphones. These virtual realities are often used for training new doctors, pilots, combat trainings and of course games.

The main issue related to virtual reality is the physical health and mental health of the user. For example there was a experiment where the participants was required to participate in a interactive virtual environment for 50 minutes and the participants reported to have some degree of discomfort, especially at the latter part of the experiment. Also they had changes in adrenaline levels and had an increase in heart rate. From my experience long periods of computer games and TV also causes headaches. Another reason that virtual reality can be a harm to health is the fact that some people get too hooked in the world of virtual reality they cant leave from it. For example I've read many articles that reported deaths while playing games continuously. Although most people don't go to this extreme level but it is still a threat to people's health. Also I read other articles saying that babies died because the parents were playing games instead of taking care of their child. So sometimes-virtual reality can be like a drug that keeps you addicted.

A few ways to solve these problems is to simply set a time period you use the virtual reality. This will decrease any symptom that occurs from using virtual reality for a long period of time, for example the headache would not happen if you are exposed for only 30 minutes compare to 4 hours of exposure where you would have an extremely painful headache. Another way to improve the situation is to reduce the strain to your eyes by taking short breaks between using the virtual reality. This would certainly reduce the symptoms caused by virtual reality.

The main ethical issue concerning virtual reality is responsibility. This is because some people get too addicted to virtual reality they do not take care of their kids and their lives. This is extremely unethical because the kid might die from lack of food or other reasons because the parents are not responsible enough.

People who are responsible are the users themselves. This is because no one asked to use it unless it is required for training for your jobs. If virtual reality training is required then the person who planned the training is responsible, but if it is not required it is the users fault. The users should be aware of their actions and use of virtual reality.

In the case of games, there is no purpose to use virtual reality; therefore the alternate decision can be simply not to play. In case of trainings for jobs they can teach manually using substitutes. For example in case of doctors they can use dead bodies and watch operations instead.

There is no consequence for not playing games but in case of the trainings there is a few consequences. For example doctors might not be so confident if they don't have any virtual reality trainings. This would also be the same for soldiers and pilots that would not receive the virtual reality training.

Virtual reality is not all bad. In case of TV you get information, and incase of virtual reality trainings you get confidence and feeling that you are experienced and that you are ready. Also there is a study that shows that virtual reality training increases the doctor's efficiency to work with their hands. This proves that virtual reality can improve your skill for jobs although it has some down sides.

## T86 - Multimedia solutions for disabled persons by Simon Ruiz

Images, sounds, and presentations are only considered to be functional for people with ordinary senses – to touch, to see, to smell, to hear, to talk, to recognize, and so on. The question is that what can the multimedia do to convey its function for people who are not able to use any of these senses? There are many ways that the multimedia can do in order to satisfy the needs of a disabled persons through advanced technology.

For example, the existence of "Care-O-bot" means a lot to people who are disabled. The Care-O-bot is a mobile service robot, which has the capability to perform to fetch and to carry and various other supporting tasks in home environments. Main emphasis is laid on integrating communicational and social features, like video telephone, automatic emergency calls and other interactive communication. The advantages and the benefits of this technology include the following:

- Increase of personal independence,
- Improvement of quality of life,
- Strengthening and support of personal mobility,
- Active aid during absence of care personnel and nurses,
- Increase of individual security,
- Unified and easy handling and operation of home infrastructure through natural speech,
- Better social integration via video-phone,
- Reduction of medical costs for in-house care.

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Due to the given demographic trends and developments within the industrial societies all over the world, practical solutions are required to help to dam exploding medical costs. Besides new decentralised supporting services for elderly and disabled people living longer at home, new technological solutions are required to facilitate their daily life. With the developed concept of an intelligent Care-O-bot, an interesting solution is available that allows to further facilitate and enable the secure living of elderly people at their private homes under safe conditions – according to their own wishes.

As mentioned, one of the social issues concerned attached to multimedia solutions are medical costs. The stakeholders of this issue can actually be the government for they will be accused of not taking care of the elderly or disabled people within the nation – leaving them with the responsibility.

For specifically disabled users of the internet, there are different solutions to different disabilities. For blind users, the modality of the presented information must be changed to tactile and/or audio output. Moreover, supplementary orientation and navigation aids, like an additional table of content containing all internal and external links on a hypermedia page, are helpful for this user group. For wheelchair-bound users, detailed information concerning the accessibility of buildings (e.g., the existence and the dimensions of ramps and elevators, the type and width of doors) is important and should therefore be automatically provided. This information is redundant for normal users and should be omitted for them.

For users interested in a specific subject, more detailed information should be provided, (e.g. information about the history of an important sacral building). If the user lacks this specific interest, such information should not be presented in order to lower the efforts necessary for building a mental model of the current hypermedia page. For computer novices, usage instructions should be augmented by an explanation. Normally, this is not necessary for experienced computer users. The response time of a hypermedia system is extremely critical from a usability point of view.

Three individuals are considered in making these solutions come to work. One is the disabled end-user (the person with special needs, who is using the assistance system). Another one is the facilitator/care person (e.g. a therapist, pedagogue or family member) responsible for the configuration and adaptation of the user-interface. Finally, the integrator/administrator carrying out the technical set-up of the system. The co-operation between these three groups of users is essential for optimization and successful use of the system. The systems are tailored to the very specific needs and abilities of the three different user groups according to the specific roles they play in setting up, configuring and operating the entire system.

## T87 - Multilingual selection possibilities of CDs and DVDs. by Chirag

Today whenever we buy a CD or DVD movie, it always comes with an option of subtitles. **Subtitles** are textual versions of the dialogue in films and television program's, usually displayed at the bottom of the screen. They can either be a form of written translation of a dialogue in a foreign language or a written rendering of the dialogue in the same language - with or without added information intended to help viewers with hearing disabilities to follow the dialogue.

Same language captions, i.e., without translation, are primarily intended as an aid for people who are deaf or hard-of-hearing. Subtitles in the same language as the dialogue are sometimes edited for reading speed and better readability. This is especially true if they cover a situation where many people are speaking at the same time or speech is much unstructured, as the human brain has difficulty absorbing unstructured written text quickly.

Although same-language subtitles and captions are produced primarily with the deaf and hard-of-hearing in mind, many hearing film and television viewers choose to use them. This is often done, because the presence of closed captioning and subtitles ensures that not one word of dialogue will be missed. Films and television shows often have subtitles displayed in the same language, if the speaker has a speech disability and/or an accent. In addition, captions may further reveal information that would be difficult to pick up on otherwise. Some examples of this would be the song lyrics; dialogue spoken quietly or by those with unfamiliar accents; or supportive, minor dialogue from background characters. It is argued that such additional information and detail will enhance the overall experience and allow the viewer a better grasp on the material.

Other benefits of putting subtitles in a movie disc are that you can turn them on or off whenever you want to so that they don't become a disturbance in the movie. As stated above if the subtitles are in the same language, like in some Hollywood movies they have English subtitles is for the people who know English but want to improve it by listening to the dialogs as well as reading the subtitles. Also for the people who are hard of hearing can better understand the movie with the captions which tell them what is currently happening in the movie. For example, if there is a siren heard, it appears in captions at the bottom and that tells the deaf person what is going on in the scene.

Earlier when there used to be subtitles of different languages in the same movie; they had the problem that they won't work in other regions. But now they are region free DVD players and recorders which can play DVDs from any region.

The person putting the subtitles in may translate both form and meaning. He may also choose to display a note in the subtitles, usually in parentheses (). This allows that person to preserve form and achieve an acceptable reading speed, by leaving the note on the screen, even after the character has finished speaking, to both

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preserve form and allow for understanding. For example, the Japanese language has multiple first-person pronouns (see <u>Japanese pronouns</u>), and using one instead of another implies a different degree of politeness. In order to compensate, when translating to English, he may reformulate the sentence, add appropriate words and/or use notes.

Some of the people who put subtitles in movies purposely provide edited subtitles or captions, to match the needs of their audience, for learners of the spoken dialogue as a second or foreign language, visual learners, beginning readers who are deaf or hard-of-hearing and for people with learning and/or mental disabilities. For example, for many of its films and television program's, it first displays standard captions representing what is being said in the program audio, word-for-word, if the viewer selects "CC1", by using the television remote control or on-screen menu, however, they also provide edited captions to present simplified sentences at a slower rate, if the viewer selects "CC2".

Also the problems with subtitles is that its hard for people to watch the movie while reading at the same time which then make the movie hard to concentrate on.

## T88 - Surveillance and privacy by Wilanth

Surveillance cameras have become such a common part of a certain place around the world in the past few years. Supermarkets, department stores, highways, streets, convenience stores and now even in schools there are surveillance cameras somewhere in the ceiling. Yes, there is crime in the world everywhere. But isn't it too much to have nowhere to go without being recorded onto a surveillance tape?

At East Bay High school, teachers have a new way of looking over the campus. When a commotion is seen on surveillance, teachers can send a security officer right over to the scene. The principle has access to these surveillance tapes even at home 24/7. Students have no way of denial, since there are these surveillance cameras.

Now not many people would disagree, that this is going too far, and has started to be more of an invasion of privacy instead of a way of security. Most states in the US do not have cameras in washrooms or locker rooms, but not all. But, even if there aren't cameras in the washroom, there are cameras outside watching a person go in and out of a washroom. Recently, with the technology we have, cameras are so hard to see, that most people do not know that they are being watched.

The whole purpose of a camera is to catch crime. But criminals aren't normal civilians walking down streets, not knowing they are watched. Criminals know, and when they realize that they are being watched, they some how get rid of the camera or just move targets. So the cameras in stores are actually there to scare crooks away.

There must be a different way of protecting stores other than having cameras that monitor the store 24/7, taking away everyone's privacy

## T89 - Global access to information available on CD-ROMs versus Internet by Tommy

In the modern information age, the main source of information that most people tend to turn to is the internet. It is readily accessible to anyone with a computer and an internet connection. It is for this very reason that most people prefer to use the internet to quickly find information rather than going to their local library and checking in the reference section. Another way of storing information is CD-ROMS. Although they are not as accessible as the internet, they are much more compact and easier to store than books.

### What are the issues associated with this subject?

The main issue of the internet lies in its strength. The internet's accessibility is a double-edged sword. The fact that anyone can access it easily and read its content also means that anyone can create what is on the internet. Anyone can post up any information that they like, whether it is true or not.

CD-ROMS, however, tend to be safer because people who release CD-ROMS generally are respectable companies or educational institutes.

### What are the ethical issues?

Ethically, there are problems with people deliberately posting up false information or offensive content. This is most clearly seen in so called "shock sites" such as Lemon Party or Tub Girl. Web sites like Wikipedia, where anyone can edit the information presented, often have problems with people editing the information so that it is all false or replacing it with offensive content.

There are also issues with people taking CD-ROMS, copying them, and then selling them for profit, which is a breach of copyright laws.

#### Who is responsible?

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The people who are responsible here are the ones who post up the offensive content and to a certain extent, the people who fail to establish ways to stop people from posting offensive content.

#### What solutions can overcome the problem?

A solution to the problem of people posting false or offensive content on websites such as Wikipedia would be to force every change to an article to go through inspection before being allowed for public viewing. This way, bad changes to articles could be filtered out, and good changes would stay. The only problem with this would be the fact that hundreds of changes are made to Wikipedia articles everyday, and inspecting each and every one of them would be either impossible or take large amounts of work.

Solutions to the problem of shock sites are already in place. Filters have been set up in many offices and educational institutes to block out sites with offensive content. The downside to a solution like this is that many other sites are blocked as well, such as humor sites or certain site that are used for sex education. Because filters operate using certain programmed rules, they are not able to distinguish between legitimate websites and offensive ones. Another possible solution would be to put stricter rules on what kind of websites would be allowed and have a committee to approve new websites. With the number of websites currently on the World Wide Web however, such a feat would be near impossible. There would also be complaints about infringement of civil rights.

The problem of piracy could be solved by creating and enforcing stricter laws. Regular checks could be conducted on stores to see if they are selling pirated software or not. The problem with this is that piracy is so widespread.

A problem involving something as big as the internet probably has no good solutions that would take effect globally. The best solutions that we have are ones that only have a local impact.

## T90 - Use of virtual actors in films by Taro Kondo

In many of the modern films, usually ones about fantasy, virtual actors are used to give more realism to the audiences. They are neccessary for voices and motions of computer-generated figures, like aliens and gnomes. Before the time at which film directors began to set their eyes on computers and tools for producing 3D graphics, they attempted to have such figures in their films by either making actors wear costumes, or attaching very thin wires on hand-made structures so that the staff could control them from afar. Both methods lead to lack of quality of the figures when they appeared on screen. At the age of technological improvement, virtual actors resolved this problem.

In the process of constructing a 3D-graphic scene, the first step that is taken is monitoring and taping certain actors, those who would later come out on screen as 3D graphic figures. This 'motion capturing' has to be done not only from one angle, but from all around: top, bottom, front and back. To make it easier, a turn table is often used. Taking in account of the positions of shadows and the light source is essential too, because they have to be correspondant to the script.

After that, the film staff transfer the recorded data in computers and they reconstruct or digitize the visual appearance of the actors, maintaining the original movements. There are several ways for doing this, but the one performed the most is 'replacing the images with abstract models and editing from there'. What is meant here by 'abstract models' is that only the general body forms are presented, in another word, polygons. The simplification allows the 'editing', in which almost every physical characterisitcs except the 'core structure' are reshaped. Just to note, the final images can be synthesized into either real or non-real (virtual) background.

The ethical issues arising are that some of the virtual actors are demanding credits for their performances. As one example a man who provided movements for elves and orcs in The Lord of the Rings: The Two Towers, contacted the director after the movie was aired because he did not notice his name in the closing credits. The response was that the man's contract did not mention about giving credit to him. The man acknowledged his faults of not looking at it carefully before signing it, but still argued back, "Just because they (director, staff) cover people with digital skins, they can't hide their existence." He emphasized the fact that he and the others who were digitized were 'crucial to realizing Jackson(director)'s vision.'

The reason behind this unjustness is mainly due to how the motions which are saved for making one movie can be re-used for many other movies and thus, in the long run the value of those from the eyes of the directors decrease. They feel it's unnecessary to credit the performers.

One obvious way of the film producers preventing confusions like above is to educate and clarify the merits and the drawbacks of becoming a virtual actor. The drawback, of course, is the lack of rights. There is a good point though, which is that everytime the actors' motions get re-used they receive, although less than before, money. From the producers' standpoint, another solution is to focus on inventing new technology, in which models are not needed for giving movements to graphical objects. The people who are willing to be the performers on the other hand, might want to be cautious with signing their contracts, avoiding outcomes that they didn't expect.

## T91 - Biased information by Sung-Hwan Chun

Biased information is an important fact to consider. An internet is now an important method to get information. Therefore, we have to consider carefully whether it is biased or not. If the information is biased it would deficit the people who are trying to use the information. For example, a boy is trying to research about Koreans, and he goes onto internet to find information about Koreans. He finds a website by someone who wrote about Koreans. Let's say that the writer was a Korean and he wrote that Koreans are all ugly and stupid.

Unfortunately the boy might believe this biased information and for his research about Koreans, the boy might write that Koreans are all ugly and stupid, which would make the boy get 'F' on his research for writing wrong information. Therefore, biased information would be a problem, since it might be wrong, and also it might spread a wrong idea or information.

The effect of biased information is global. If it was used for a small project, it might just end the project a bad grade, but if it was used for important project, like for NASA or war, the effect would be great. It might even result as a death, though it is not likely that NASA or the government would not recognize the information biased, or use the biased information. Similarly, if a person gets knowledge from biased information, it could spread globally by people to people, and soon the whole universe would have wrong knowledge.

To recognize the biased information, we have to read carefully. If the writer doesn't states with out resource, it has high possibility of being a biased. Also, if the writer states something which should have required resources, but the writer hasn't mentioned any, then it might be biased information. Some information are easy to recognize whether it is biased or not, and some are hard to recognize. But, generally, if the reader pays careful attention, he can find out whether it is biased or not.

Though readers have to be careful for biased information, I think the writers should not give biased information. Though some might have been done without purpose, and also by mistake, it could give real confusion and mistake to the readers. If the whole internet gives clean, unbiased information, then I think it would help on the etiquette and also on having pleasant internet environment.

### Biased information by Tommy

Although internet connections are able to pass a lot of information back and forth, they are not all powerful. Every internet connection is restricted by its bandwidth limit. Bandwidth is the transmission capacity of a communications device, or the amount of data that can be passed along a communications channel in a given period of time.

The main issue associated with this subject is how limiting it is. Applications that communicate a lot with several different computers at once can put a great strain on the computer that they are running on. For example, torrent programs set up connections and download files from many other computers. Quite often, this uses up a lot of bandwidth on the host computer and the person using the torrent program will experience a significant drop in connection speed when using other applications, such as internet explorer.

Extremely popular websites or files that receive a large number of "hits" per day from users around the world may cause server crashes or certain images not to be displayed. People surfing a website that is being browed by many other people may experience slow loading times or sometimes no response at all. Images hosted on image hosts such as Photobucket may not display if too many people view them. Instead, a message saying "Image not displayed due to exceeded bandwidth" is posted.

The ethical issues here are people who deliberately upload large amounts of data in a very short period of time to certain websites. This causes those websites to exceed their bandwidth and become inaccessible to other people. This is especially the case for websites that do not host themselves. Instead, they rely on other hosts such as Geocities or Bravenet. These hosts often put a limit on the amount of bandwidth that sites are able to use. When a site exceeds its allowed bandwidth, it is taken down temporarily.

The problem of programs hogging bandwidth on internet connections can be solved by setting limits to how much bandwidth certain programs are allowed to use, or by simply running those programs at times when nobody else is using them. The problem with setting a limit on bandwidth is that torrent programs may experience slower download rates.

For popular sites that experience server crashes due to too many people trying to access them at once, multiple servers can be set up to help ease the load on individual servers. The file sizes on these sites can also be reduced so that not as much bandwidth will be used when people load a page.

People who deliberately upload large amounts of data for the purpose of crashing a site can be stopped or at least hindered by placing a limit on the amount that can be uploaded at once. Also, the security for many web hosts or servers could be increased so that hackers would have a harder time breaking in and uploading things to

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exceed the bandwidth. The problem with this is that it would stop people who upload large files for legitimate purposes.

Because resources are limited, the problem of limited bandwidth will always exist. It cannot be extinguished even if connections are upgraded to be able to transfer more data faster, because the data size will also increase to keep up with the faster transfer rates.

## T92 - Reliability of data by Harsh

What exactly do we mean by the phrase "Reliability of data?" The word reliability suggests trust, good quality etc. So perhaps we mean whether data can be trusted or not. I mean how much can we rely on data in today's world? The answer, of course, is a lot. We rely on data everyday. We rely on the data published in newspapers, published on the Internet, published in our books and data in form of numbers.

However, to what extent can a form of data be relied on? And how do we decide if we should rely on it or not? In order to answer these two questions, many things should be considered. First of all, the source of the data should be taken in consideration. For example, you are supporting a topic for a debate. Is it intelligent to rely on a piece of evidence that was published on the Internet by a 12 year old? Or is it reliable to rely on something that was on a non-famous website by a non-famous author? Therefore, when relying on data, the source of the data must be taken in consideration because it really does matter where the data's coming from.

The second thing that must be taken into consideration is whether the data is published or not. As in, I could just make up some numbers and write a story but you shouldn't rely on it unless it's been checked by others and published in a proper journal or a paper. Published data was published after been checked by a lot of people so it can be trusted.

Third thing that should be taken into consideration and this is perhaps one of the main ones is whether the author is biased or not. Even if he author is a very famous author, you have to consider where he's coming from. For example, if it's a Christian author then of course he'll write good things about Jesus so he cannot be entirely trusted. If you really want to find about Jesus then go to an author who didn't grow up learning about Jesus. Personal biases can ruin the entire point of the document. Therefore, the author of the respective data must be considered.

The three points made above are the three main points that should be taken in consideration while deciding whether to rely on the data or not. One last thing is whether cross-examining the data will yield any arguments or not. This can be really hard and time consuming but it's a very necessary one. The data must be compared with other data from the same author or from different authors from different backgrounds.

If a piece of data can pass all these tests then you can rely on it! Data is very important in today's hi-tech world so make sure you think before you rely on something the next time!

## T93 - Social and Ethical Issues Relating to Games by Matthew Wilder

Video games today are immensely popular, and for many people, are a part of their lives. In a recent survey (2003) taken in random high schools throughout the United States, researchers found out that every single child that had taken the survey had played a video game at least once in their lifetime. Considering the enormous popularity of video games, it is important to understand what, if any, effects there are to people who play video games.

One obvious possible effect that should be considered rises from the graphic themes portrayed in many modern video games. For example, in the computer game, America's Army, a player becomes an American soldier, goes through various training simulations, and in the end is sent to fight in a real combat situation along with other players across the internet.

The game, produced and distributed by the U.S. Army, is widely criticized as a means of propaganda and recruitment. Critics often argue that by making the army seem "cool" in the game, adolescents, who make up the majority of the gaming population, and young adults gain a positive view of the armed forces. The critics believe that the game is a sick and unruly way of recruiting people because many of the kids that play the game are too naïve to know other bad aspects of joining the army. Another classic example is the game Grand Theft Auto.

The game exhibits a countless number of controversial themes such as violence, nudity, racism, and prostitution to name a few. In Grand Theft Auto, a player becomes a character in a virtual city, and is able to shoot, stab, and hit anybody the person comes into contact with.

Furthermore, the character is able to receive the services of a prostitute and group up with gangs that are based on race. Critics of the Grand Theft Auto series say that the pernicious acts carried out by the player in the virtual world give the player bad ideas that the player might actually act on in the real world. Critics say that this is what

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precisely caused the mass killings of the Columbine incident. Two kids who played the graphic shooting game Doom suddenly got the idea to shoot other people just as they did on their computers.

Another possible effect of video games comes from a research done by the American Psychological Association. The research suggests two things. One, that the playing of violent video games by a child tends to increase the child's aggression. In 2005, the reality television show 60 Minutes took this idea of a positive correlation between gaming and aggression and created a documentary.

In the documentary, the cast took on the case of Devin Moore, an 18-year old murderer who shot dead three policemen in Alabama. The show concluded that Moore was inspired to do such a thing by the video game Grand Theft Auto: Vice City. Two, that children who play games lack social skills. Researchers believe that when children stay at home sitting in front of their computers, they sacrifice time spent with other children. Some research shows that there might even be a correlation between games and depression caused by isolation and loneliness.

Another effect of gaming is addiction. Though addiction resulting from gaming may seem silly, the truth is, game addiction is a very real thing. Consider this excerpt from an article on cnet.com.

Dennis Bennett was failing his college classes, his marriage was in trouble, and he wasn't being much of a father to his 1-year-old son. But he had progressed to Level 58 as Madrid, the Great Shaman of the North, his character in the online role-playing game "EverQuest," and that was all that mattered at the time.

Other examples of game addiction are more severe; a man in South Korea died of malnutrition after playing an online multiplayer computer game for more than sixty-three hours, and a man in China lost consciousness after spending more than forty-eight hours in front of his computer.

Facilities have been set up to treat game addiction worldwide. In the U.S., Harvard University Hospital and Mclean Hospital both have full time game addiction treatment centers; in Amsterdam a clinic specialized in game addiction has been set up; and in China, a new massive addiction treatment facility treats alcoholics, drugabusers, and gamers.

So what is being done to counter the negative effects of gaming on society? Here are some of the things being done in countries around the world today.

**In Australia**, the Office of Film and Literature Classification created a games section that rates games. The OFLC banned has banned several games recently (Grand Theft Auto, 50 Cent:Bulletproof, and Getting Up, Contents Under Pressure).

**In Germany** the government is allowed to censor games. World War 2 games are often censored, with games such as Medal of Honor, Call of Duty, and Return to Castle Wolfenstein leaving out every bit of Nazism in them.

**In China**, the government is trying to pass a law that allows for people to play a maximum of three hours of consecutive play, with a five hour break between each time they play.

**In Greece**, the Greek parliament passed a law (2002) that entirely outlawed electronic gaming. Later this was repealed and restricted to only internet cafes.

In Argentina, video games must have the lable, "Overexposure is harmful to health," on the packaging.

An interesting and somewhat geeky video of what happens when you play video games for too long. <u>http://www.youtube.com/watch?v=SBhzUrpzIVY</u>

### Knowledge of technology

In order to study and evaluate the social and ethical issues involved in the use of images, sound and presentations, the student must have an understanding of related technological concepts. These may include the following.

### Design and creation concepts

## T94 - Key terms—animation, bit-map versus vector graphics, object-oriented, clip art, CAD, hypermedia, hypertext, pixel, resolution, MP3, MIDI, morph by Ken Moyer

Animation is the rapid display of a sequence of 2-D artwork or model positions in order to create an illusion of movement. It is an optical illusion of motion due to the phenomenon of persistence of vision. This could be anything from a flip book to a motion picture film.

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Bitmap, is a data file or structure representing a generally rectangular grid of pixels, or points of color, on a computer, paper, or other display device. On the other hand, Vector graphics is the use of geometrical primitives such as, points, lines, curves and polygons, which are all based upon mathematical equations to represent images in computer graphics.

Object-oriented programming (OOP) is a programming paradigm that uses "objects" to design applications and computer programs. Paradigm by definition means one that serves as a pattern or model. Today, many popular programming languages (such as Java, JavaScript, C#, C++, Python, PHP, Ruby and Objective-C) support OOP.

Clip art refers to pre-made images used to illustrate anthing. Today, clip art is used extensively in both personal and commercial projects. They range from home-printed cards to advertisement. Clip-arts can also be in both electronic or printed form. It can be very convieniently used.

Computer-aided design (CAD) is the use of a alot of computer-based tools that assist engineers, architects and other design professionals with their design activities. This will help design, develop and create products that will be goods used by consumers or intermediate goods used for other products.

Hypermedia is used as a logical extension of the term hypertext, in which graphics, audio, video, plain text and hyperlinks intertwine to create a generally non-linear information. The World Wide Web is a classic example of hypermedia because it has all of the characteristics I just menationed in my definition of hypermedia. Hypertext is a method of storing data through a computer program that allows a user to create and link fields of information and to retrieve the data. The most frequently discussed form of hypertext document contains automated cross-references to other documents called hyperlinks. Selecting a hyperlink causes the computer to load and display the linked document.

A pixel is a single point in a graphic image. A pixel is not really a dot, nor a square, but an abstract sample. With care, pixels of an image can be created at any size without the appearance of visible dots or squares. But in many contexts, they are reproduced as dots or squares that can be visibly distinguished when the graphics are not fine enough.

Resolution is the act, process, or capability of distinguishing between two separate but adjacent objects, sources of light, or between two nearly equal wavelengths. resolution can be measured in various ways. Basically, resolution quantifies how close lines can be to each other and still be visibly.

MPEG-1 Audio Layer 3, more commonly referred to as MP3, is a popular digital audio designed to greatly reduce the amount of data required to represent audio. Although the amount of data required is reduced, most music will still sound like a faithful reproduction of the original uncompressed audio to most listeners.

MIDI (Musical Instrument Digital Interface) is an industry-standard electronic communications protocol that enables electronic musical instruments, computers and other equipment to communicate and control each other in real time. MIDI does not transmit an audio signal. It simply transmits digital data such as the pitch and intensity of musical notes to control signals for parameters such as volume, vibrato and panning, and clock signals. Morphing is to to transform by computer, usually an image. Most often it is used to depict one person from turning into another through some magical or technological means.

## T95 - Data integrity by Dhruv

In a nutshell, Data Integrity is the property that as the data travels; it remains faithful to its source. It is,

• The condition in which data is identically maintained during any operation, such as transfer, storage, and retrieval.

• The preservation of data for their intended use.

Data that appears as something in one place may not appear the same in another. Looking specifically at sounds. When you record a sound using a poor recorder, the quality of sound that is obtained is poor, relative to the real sound. As a result, the data has lost some integrity. It is not as close it can be to the source.

### Data integrity can be compromised in a number of ways:

It is easy also to see this with regard to images. Images, depending on the quality of the computer may or may not be adequately displayed. Also, depending on the quality of the printer, the integrity of the data may be damaged further, if the printer can't print the actual colors. Plus, the ability to Photoshop is also damage to data integrity, if it is claimed that the photoshopped picture is the original (for some reason).

Loss of data integrity can create false information that can effect situations badly. One example, say a city construction panel is shown an image of a mall to build. The picture is beautiful and they're all for the plan to build it. However, when its build it turns out to be the ugliest mall ever. The breach of data integrity affected the finances of the city negatively all because the person of image falsely made the model of the mall look better.

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Similarly an advertiser hoping to get an AD printed, sends an image to the printers. The printer is unable to recreate the image perfectly because of limitations with color and hence affects the advertisers business. It can create misunderstanding and is a major problem in the advertising industry, where appearance is everything.

There are many ways to minimize these threats to data integrity.

These include:

- Backing up data regularly
- · Controlling access to data via security mechanisms
- Designing user interfaces that prevent the input of invalid data
- Using error detection and correction software when transmitting data.
- Having the best possible sound and display settings to maximize closeness of data to the actual source of data.

## T96 - Consistency in design elements by Sam

#### Consistency in Design Elements... What does it mean?

In various designed works, such as websites, yearbook layouts, books, magazines, brochures, etc... there are often consistent designs throughout the material. This is a technique in designing called consistency. We face works with consistent elements more often than we may think. For example, our text books that we use in school often uses consistency in its design. Often the fonts, styles, colors, and sizes are kept constant for each particular purpose through out the book. The title of the chapter will always have the same font, style, color, and size and so will the actual text of the chapter. Even other than text, sidebars, tables, graphs, cartoon characters, and other graphical elements are often all kept constant throughout the book.

### Why Use Consistency?

#### There are various reasons why designers keep consistency in their work.

By having consistency, it allows people to see that it's part of a bigger picture. For example, if University of Washington keeps the school colors, purple and gold, throughout its website, as we go deeper in the website we still know that the page we are viewing is part of the university website. On the other hand, let's say that while browsing the University of Washington website, there is all the sudden a page with green colors rather than purple. If this happens then we are not so sure that we are still in the website of the same university or if we have been bumped to, let's say the University of Oregon website for some reason. Yes, we can look at the web address and find out, but still it will cause the viewers some confusion.

When consistency is not used in presentations, such as in power point, the change in design can cause the viewers attention to draw away from the actual point that the presentation is trying to make. If, for example, the colors keep on changing each page on a power point presentation, your attention is carried away by the change in color, and you will miss the point and purpose of the power point; how it is important to brush your teeth.

### Why Not Use Consistency?

Even though consistency seems to be a great technique in designing, it does have its share of setbacks.

When using consistency in designing, the designer's ability to freely create the work is limited. When a designer is making his work, he wants to freely express his style and imagination in his work. When there is consistency throughout a power point presentation, for example, the designer is forced to follow the patterns in colors, font and size of text, etc... What if then the designer felt that for example, the school colors weren't matching the contents of the page. Does he still have to keep those colors just to keep consistency? This is why consistency in design is not always the right method. As each of the contents within pages is unique, it sometimes requires unique designs of its own to present it.

A big reason why people shouldn't always use consistency is because, easily put, it gets boring. As us viewers see these same colors, fonts, styles, images, etc..., we can quickly become bored of it and lose interest. When we lose interest, we are not getting the points made in the presentation. That is why it's good to change things up a bit and keep the viewers interested.

So Should We or Shouldn't We Use Consistency?

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There is no right answer to this question. The answer to this question is completely on personal taste. Some people may like the fact that everything is kept constant and in a organized form. However, others may regard it as boring and want more of constantly changing designs to keep the interest level up.

# T97 - Use of appropriate fonts, sound, images, video to convey a specific message by Harsh Sharma

In today's world, collecting data or information is almost as easy as going to a convenient store and buying a pack of gum. Through Internet, a person can collect and view any kind of data right from his home. However, the raw data doesn't have any value until it's properly represented and conveyed. Word and Excel do a great job of collecting and organizing data, however, it is upon the person to choose the right font, sound, image or video to convey his message.

### Fonts:

Fonts play a huge role in how you want your message to me conveyed. I remember spending an hour once to select the right font for a dodgeball tournament flyer. Microsoft's products provide a user with at least 300 preinstalled fonts! The most commonly used ones are "Times New Roman" and "Arial". This is because these two fonts represent sincerity and seriousness and most people write reports or assignments using Word. For example, let's say a father was writing an invitation for his son's birthday – he would NOT use "Times New Roman" because nobody would want to come to a boring, sincere party and that's what "Times New Roman" represents.

Another example is when people create flyers or brochures. The fonts used should be a combination of funny and sincere fonts. So for the heading, a person should use a font that puts a lot of emphasis, such as "Britannic Bold" and for subheadings, a person should use fun fonts such as "Jokerman" and then for the text under subheadings, "Times New Roman" should be used. This would represent that the place is fun and the person incharge of it is serious about it. Therefore, it is very necessary to use the correct font or you might lose a business deal or have an empty party!

## Sound:

You can't just depend on the fonts to convey your message especially when it comes to presenting to a group. One of the reasons why I chose to write on this topic is because I have experienced all of this myself – I have spent hours trying to find the right font or the music to play along with my presentation. For instance, last year for ITGS presentations I always used music to attract people's attention and it had to be the right music. It had to be music that wouldn't distract anyone and it had to be music that would attract them to pay attention to the music.

Therefore, I remember choosing "End of innocence" because it just plays in the background providing a nice rhythm and tone to the presentation and it's not loud enough to distract anyone. Also, be careful with "Microsoft PowerPoint", which provides a lot of sounds that could really disrupt your presentation. Sounds like "Applaud" and "Buzz" take your presentation in a different way. Therefore, be careful with the type of music/sound you choose and believe in "KISS" (Keep it simple stupid). Don't overdo it but do it a little bit because it helps. For example, if you are presenting a package honeymoon tour then playing "My heart will go on" in the background wouldn't hurt!

#### Image:

The following phrase pretty much illustrates the importance of pictures - "A picture is worth thousand words". Again, I remember putting up pictures of half naked celebrities during a PowerPoint presentation in ITGS class. Mr. Jamieson said, "In all my years of schooling, nobody has ever done that before but it's a great idea. Everyone was paying attention to the presentation!" Perhaps it wasn't the presentation that they were paying attention to but at least the half naked pictures got their attention.

What we are trying to do here is to convey our message and if you have to use half naked pictures to do that, so be it. St. Mary's students usually don't listen to other people's presentations so you have to have something different in your presentation that would attract them. However, images should be relevant to the topic and help the audience learn more about your topic. I'll go back to the Honeymoon package tour example – if the person adds a couple of pictures of the honeymoon suite or a beach along with Celine Dion music – people are bound to choose that tour. Therefore, use pictures that are relevant to the topic so that the audience has an idea of what you are talking about.

#### Video:

Personally, I haven't had any experience in the video category but I would assume it to be the same as images because they both help see the audience what the presentation is about. Back to the honeymoon package, if the person adds a video of a couple enjoying a nice time and laughing in their suite or on the beach – that would

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really help sell the package. Or let's say, a school is trying to get more students and the principal is presenting the school to a mass audience. A nice, compiled video of the current students playing, studying, eating lunch and mingling with each other would really help parents see what the school is about.

So the point I am trying to make here is that fonts represent whether it's a fun thing or a sincere thing and music adds a rhythm and tone to the presentation. Images and videos however let the audience imagine and vision what the thing is about. If all these four things are used in the right way, you are bound to have a perfect presentation or that perfect invitation to your birthday party.

#### Storage, processing and access concepts

# T98 - File formats, for example, storage requirements, loading time, portability by Xiao Xiao

So you have finally finished editing that vacation movie and turns out that there isn't enough space on your computer to save it or perhaps a different computer cannot view that movie? There can be many complications when it comes to viewing or accessing a piece of media. Therefore, we have to be careful when dealing with storage and access concepts.

File format, in particular, is the most important. I have had so many problems regarding file formats in the past. For example, I downloaded a movie from the Internet and my Windows Media Player couldn't play it because the movie had a ".mov" extension and after researching on the net it turned out that I had to download Apple's Quicktime player to play the movie. Sometimes, I had to use different image viewing software to view an image and not my usual Microsoft Picture Viewer. If you are working on a project or editing an image, then make sure you choose the most popular extension. In case of videos, that extension would be ".avi" and in case of images that would be ".jpeg". Please choose the right extension otherwise the friend to whom you are sending a (edited) picture of your girlfriend would be disappointed when he is not able to view the photo.

Another consideration should be storage requirement. But what exactly is storage requirement? In this case, it means whether your e-mail provider would allow that presentation or image be attached to the e-mail. Or whether there's enough space to save that movie on your computer! In either case, make sure that you know how much space your e-mail provider provides in terms of attachments and in terms of email storage size. In today's world, everyone sends and receives photos using e-mail. Therefore, it is necessary to choose the right e-mail provider. No wonder Google's Gmail is so popular – currently it is providing 2805 MB of storage! (10 MB or more in attachments) If you already have a Gmail account then you need to be concerned about the space available on your computer. Most computers today come with at least 100 GB of Hard Disk space. If, however, your computer doesn't have that much space – please go to a nearby vendor and get a bigger hard drive because in today's world (especially if you are a photoshopper) you need 160 GB of space!

Loading time is basically dependent on the computer's RAM and the processor and of course the type of the file. For example it would take only a second to open a Word document but it would take 10 seconds to open a photoshop file! Loading time can only be increased if you change your computer's RAM or increase the processor speed (requires a change in CPU). RAM determines how many programs you can have running at the same time and processor speed is just how the computer would run so in today's world at least 1 GB of RAM and at least 2 GHz of processor speed!

In today's fast world like Tokyo, portable devices are the way to go. PDAs, iPods, multi-functional phones have taken a huge rise in sales! This is because people don't have the time anymore to sit down at home and watch movies. Everything has to portable therefore file sizes are being compressed and being made small. Music is coming in mp3 format so people can carry it in their pockets and movies are also being compressed so people can watch it while traveling on traisn!

So the main point is that you have to know your consumers. You have to set your file format and size according to who will be viewing your data. If it's someone in a third-world country then you better make everything low quality so he/she can see it on a low-performance computer. But if it's someone in a hi-tech country (like we are in) then go with high quality stuff!

## T99 - Sound, image and video capture and editing by Chirag

The main sources of entertainment today are through music, movies and other kinds of technologies. For different places in the world people spend months and year making television programs or music album that we listen to or watch in our everyday life. All this is done by different types of processes and mechanical instruments like microphones, video cameras, digital cameras etc.

Sound recording and reproduction is the electrical or mechanical inscription and re-creation of sound waves, usually used for the voice or for music. The old method of recording sound is called analog recording.

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Analog recording is a technique used to store audio or video signals for later playback. The analog recording method stores signals as a continual wave in/on the media, rather than the discrete numbers used in digital recording. The wave is stored as a physical texture on a phonograph record, or a fluctuation in the field strength of a magnetic recording. A perceived drawback of many analog recordings was noise of the media, or of the equipment, and of production equipment limitations. Repeat playing of a gramophone record introduces wear that made the original recording more difficult to hear over the noise level. Careful removal of dirt is helpful; as is careful handling.

The other type of recording that is used today is digital recording. In digital recording, the analog signal of a sound is converted into a stream of discrete numbers, representing the changes in air pressure through time; thus making an abstract template for the original sound or moving image.

The invention of digital sound recording and the compact disc in 1983 brought massive improvements in the durability and sound quality of consumer recordings. The CD initiated another massive wave of change in the consumer music industry, with vinyl records effectively relegated to a small niche market by the mid-1990s.

The most recent and revolutionary developments have been in digital recording, with the invention of the first purely electronic consumer recording format -- the MP3 digital music file -- accompanied by the invention of solidstate computerized digital audio players like the Apple iPod. New technologies such as Super Audio CD and DVD-A continue to set very hi-fi digital standards. The field covers many areas, from Hi-Fi to Professional audio, Internet radio and Podcasting.

Technological developments in recording and editing have transformed the record, movie and television industries in recent decades. Audio editing became practicable with the invention of magnetic tape recording, but the use of computers has made editing operations faster and easier to execute, and the use of hard-drives for storage has made recording cheaper.

We now divide the process of making a recording into tracking, mixing and mastering. Multitrack recording makes it possible to capture sound from several microphones, or from different 'takes' to tape or disc with maximum headroom and quality, allowing maximum flexibility in the mixing and mastering stages for editing, level balancing, compressing and limiting, and the addition of effects.

By images the thought that strikes our mind at first is photography. Today the technology is advancing tremendously fast with new types of cameras coming out in the market every day. Traditional photography was a considerable burden for photographers working at remote locations (such as press correspondents) without access to processing facilities.

With increased competition from television there was pressure to deliver their images to newspapers with greater speed. Photo-journalists at remote locations would carry a miniature photo lab with them and some means of transmitting their images down the telephone line. In 1981 Sony unveiled the first consumer camera to use a CCD for imaging, and which required no film -- the Sony Mavica. While the Mavica did save images to disk, the images themselves were displayed on television, and therefore the camera could not be considered fully digital. In 1990, Kodak unveiled the DCS 100, the first commercially available digital camera.

Its cost precluded any use other than photojournalism and professional applications, but commercial digital photography was born. Digital imaging uses an electronic sensor such as a charge-coupled device to record the image as a set of electronic data rather than as chemical changes on film. Some other devices, such as cell phones, now include digital imaging features. Even though there are no chemical processes, a digital camera captures a frame of whatever it happens to be pointed at, which can be viewed later.

Video technology was first developed for television systems, but has been further developed in many formats to allow for consumer video recording. Video can also be viewed on through the Internet as video clips or streaming media clips on computer monitors.

Video is different than film, which captures a moving image as a sequence of still pictures photographically. Different characteristics of a video that the video and audio quality depends upon are:

- Number of frames per second
- Interlacing
- Video resolution
- Aspect ratio
- Color space and bits per pixel
- Video quality

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- Video compression method (digital only)
- Bit rate (digital only)
- Stereoscopic

or

## Sound, image and video capture and editing by Takafumi

There would be many ethical things to talk about in this topic. Ethical issues, responsibility, laws these are the topic that I would like to pick up. There are many problems with video capture and editing some video clips and data.

First, I would like to talk about the ethical issues. Is it really good to edit or change anything from the original without getting permission from the creator or not. And also is it ok to make some copies from the originals to earn more money. There are many ethical issues and problems happen in this topic. Now days, people do not think about those things but to earn money for their own good. They would not think about the people who made the original item and make pirated items to earn more money. But also people who buy would also do not think about them. There are many moral issues putted into this subject.

Responsibility would be putted on every people. If people would not make any pirated copies, there would be no need for any laws or ethnical problems with the game makers, or creators. If we all did not buy or make any pirated items, people would not make one anymore. Thus all the responsibility would be putted on us whether buy the pirated item or not and make pirated item or not.

There are few laws made to go against the act. Each law would make the people pay a lot or to keep them in jail for few years. But the laws are not strict enough and it is really hard to keep on track that the numbers of pirated edited items are still made in many places. Which tells us that how important not to buy any pirated items.

In total, the sound image and videos are really depends on our hands to keep them in a really nice way or bad way. Good way is to buy or borrow officially from the store or not buy any pirated items. Bad way treatment is to produce and sell all those pirated stuffs.

# T100 - Updating and combining sounds or images at a later point in time to create a new work of art by Chaan Tutlam

Although there isn't much to be said about this topic, the main lesson to be learnt is that you should always save your work because you'll never know when you might need it again. For example, let's say I have a picture of the Ice Cream Bash and I feel like it's irrelevant and would never need it again, hence I delete it. Also, let's say I have a song on my computer and I think that it's taking too much space so I end up deleting that too.

Now Mr. Martens asks me to send a picture of Ice Cream Bash to him so that he can use it in his 2nd semester slideshow and I realize that I deleted the picture! Not just that, I could have included that song by Vanilla Ice in the slideshow to give it an all "Ice-cream" effect! However, I deleted both of those! That could have been the "new work of art" that I'd have been able to create from one song and a picture!

So basically the lesson here is never delete anything unless it's absolutely necessary (as in you are running out of hard disk space and desperately need that extra 5 MB). Nothing is irrelevant in life. I'll give you a real life example, I just took a vacation with my family and my dad asked me to create a slideshow of all the pictures we took. In order to do that, I got 10 songs from my iTunes library and combined them all using a friend's Mac. I had to combine the songs so that there's no pause between the songs. I combined them using GarageBand and even though the file size was huge, it was worth it. And then I took all the photos and again used a friend's mac and his iPhoto software to make a slideshow. Then I added that "huge sound file" into the slideshow and burnt a DVD.

The final result was just fabulous. The images rolled smoothly without any pause in the music! Everyone was really pleased with the slideshow and I was just really glad that I didn't delete any of my photos or sounds because if I had, then it would have been a real pain to get them all together and make such a wonderful slideshow!

You never know when you might need that data again so the lesson is: NEVER DELETE ANYTHING! If you need the space, either burn the data or copy it to an external hard drive!

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