BA(prog)III yr 14/04/2020

Lighting

- The greatest difference between professional camcorders and consumer camcorders is their ability to perform at low light levels.
- With proper lighting, however, it may be difficult for uninitiated viewers to differentiate between shots taken with an expensive studio-grade video camera and an inexpensive camcorder.
- Using a simple floodlight kit, or even just being sure that daylight illuminates the room, can improve your image.
- Onboard battery lights for camcorders can be useful, but only in conditions where the light acts as a “fill light” to illuminate the details of a subject’s face.
- As in photography, good lighting techniques separate amateurs from professionals in video shoots.

- This is a screen from The Lighting Lab.
- The standard lighting arrangement of a studio is displayed with fill, key, rim, and background lights.
- Changing any of these lights can make a dramatic difference in the shot.
- This project originally used a QuickTime container of several hundred single-frame images of the model as she is lighted by every permutation of lamp and intensity; clicking a light switch instantly shows the effect of that combination.

Chroma Keys

- **Chroma keys** allow you to choose a color or range of colors that become transparent, allowing the video image to be seen "through" the computer image.
- This is the technology used by a newscast's weather person, who is shot against a blue background that is made invisible when merged with the electronically generated image of the weather map. The weatherman controls the computer part of the display with a small handheld controller.
- A useful tool easily implemented in most digital video editing applications is **blue screen**, **green screen**, **Ultimatte**, or **chroma key editing**.
- Blue screen is a popular technique for making multimedia titles because expensive sets are not required.
- Incredible backgrounds can be generated using 3-D modeling and graphic software, and one or more actors, vehicles, or other objects can be neatly layered onto that background. Video editing applications provide the tools for this.
- When you are shooting blue screen, be sure that the lighting of the screen is absolutely even; fluctuations in intensity will make this key" appear choppy or broken. Shooting in daylight, and letting the sun illuminate the screen, will mitigate this problem.
- Also be careful about "color spill." If your actors stand too close to the screen, the colored light reflecting off the screen will spill onto them, and parts of their body will key out.
- While adjustments in most applications can compensate for this, the adjustments are limited.
- Beware of fine detail, such as hair or smoke, that wisps over the screen; this does not key well.

- This shows frames taken from a video of an actor shot against blue screen on a commercial stage. The blue background was removed from each frame, and the actor himself was turned into a photo-realistic animation that walked, jumped, pointed, and ran from a dinosaur.

Chapter 7- Making Multimedia

Memory and Storage Devices

- As you add more memory and storage space to your computer, you can expect your computing needs and habits to keep pace, filling the new capacity.
- To estimate the memory requirements of a multimedia project—the space required on a hard disk, thumb drive, CD-ROM, or DVD, not the **random access memory (RAM)** used while your computer is running—you must have a sense of the project's content and scope.
- Color images, text, sound bites, video clips, and the programming code that glues it all together require memory; if there are many of these elements, you will need even more.
- If you are *making* multimedia, you will also need to allocate memory for storing and archiving working files used during production, original audio and video clips, edited pieces, and final mixed pieces production aperwork and correspondence, and at least one backup of your project files, with a second backup stored at another location.
- It is said that when John von Neumann, often called "the father of the computer," was designing the ENIAC computer in 1945, there was an argument about how much memory this first computer should have.

His colleagues appealed for more than the 2K Dr. von Neumann felt was sufficient.

- In the end, he capitulated and agreed to install 4K in the ENIAC, commenting "...but this is more memory than you will ever need."

Random Access Memory (RAM)

If you are faced with budget constraints, you can certainly produce a multimedia project on a slower or limited-memory computer. On the other hand, it is profoundly frustrating to face memory (RAM) shortages time after time, when you're attempting to keep multiple applications and files open simultaneously. It is also frustrating to wait the extra seconds required of each editing step when working with multimedia material on a slow processor.

In spite of all the marketing hype about processor speed, this speed is ineffective if not accompanied by sufficient RAM. A fast processor without enough RAM may waste processor cycles while it swaps needed portions of program code into and out of memory. In some cases, increasing available RAM may show more performance improvement on your system than upgrading the processor chip.

Read-Only Memory (ROM)

Unlike RAM, **read-only memory (ROM)** is not *volatile.* When you turn off the power to a ROM chip, it will not forget, or lose its memory. ROM is typically used in computers to hold the small BIOS program that initially boots up the computer, and it is used in printers to hold built-in fonts. **Programmable ROMs** (called **EPROMs**) allow changes to be made that are not forgotten when power is turned off.

Hard Disks

Adequate storage space for your production environment can be provided by large-capacity hard disks, server-mounted on a network. As multimedia has reached consumer desktops, makers of hard disks have built smaller-profile, larger-capacity, faster, and less-expensive hard disks.

As network and Internet servers drive the demand for centralized data storage requiring **terabytes** (one trillion bytes), hard disks are often configured into fail-proof redundant arrays offering built-in protection against crashes.

For any doubt contact 9873961590