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3403 Video Preservation
Assignment 1
Capture Card

The capture card is an essential element for an analog to digital video conversion or digitization process. Capture cards can be used for both video and audio capture. The capture process includes converting an analog signal into a digital signal, and the capture card is the device that makes this conversation possible.[1] The capture card hardware is basically a computer chip that is installed into your computer by attaching the chip or card (it is too large to really be considered a chip) to a connector port or bus, typically using the PCI express standard. Some older bus ports that connected a video capture card to the computer included first the Conventional PCI standard then later the Accelerated Graphics Port (AGP) before PCI Express took hold.[2] The capture card is directly connected to ports to which cables can be connected to capture the signal (either video or audio) from any live or prerecorded source. The signal can come from various sources like a VTR deck, camcorder, or an HDMI device and take the form of various signal types like S-Video, RF Modulated Video, Analog composite video or digital video like HDMI and SDI.[3] When the card captures the signal, it converts it into the resulting digital files. There are also external capture cards, which can be attached to your computer using the USB ports.

The video capture card can convert the analog signal into various digital formats depending on what type of capture card is installed. There are many different cards on the market and their specifications can vary. According to one online article, two of the best types of capture cards are from Hauppauge, Elgato (for Mac),[4] and Magewell.[5] There are also different capture cards used for Windows and Mac computers, and the format that is captured onto the computer depends on the card used. The H.264 video codec is one of the most popular digital video formats generated by different cards, but video and audio formats captured can depend on the type of capture card. The cards can support signals from various sources including analog and digital sources (like VCRs and DVD players), a live video streams (from the internet or TV), and are used often for video game longplay.[6] When reformatting a signal from a transfer station, the path that the signal takes from the source can vary in a number of ways, but ultimately the signal passes through the capture card before it is sent to a storage device like a hard drive,

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[1] "Video Capture," *Wikipedia*, July 18, 2017,
https://en.wikipedia.org/w/index.php?title=Video_capture&oldid=791121140.
[2] "Accelerated Graphics Port," *Wikipedia*, October 19, 2017,
https://en.wikipedia.org/w/index.php?title=Accelerated_Graphics_Port&oldid=806073874.
[3] "A Complete Introduction to the Capture Card," Wondershare, accessed October 22, 2017,
https://filmora.wondershare.com/screen-recorder/introduction-to-capture-card.html.
[4] David Beren, "The Top 6 TV and Video Capture Cards," Lifewire, accessed October 22, 2017,
https://www.lifewire.com/tv-video-capture-cards-1130676.
[5] "The 10 Best Capture Cards of 2017," *FabatHome* (blog), accessed October 22, 2017,
https://www.fabathome.org/best-capture-card/.
[6] "TV Tuner Card," *Wikipedia*, September 5, 2017,
https://en.wikipedia.org/w/index.php?title=TV_tuner_card&oldid=799025145.

server or the computer's hard drive. Playing back the signal after capture can depend on the playback software and which formats that it supports. It may be necessary to transcode the video and audio signals to facilitate this.