New Technology Essay, Research Paper

In my research, I am focusing on the new technology dealing with computers. This technology includes CD writers, DVD players, digital cameras, and cable modems. I will describe each technology and then how it will effect today’s society. Technology is the way of the world now, so improving technology helps to improve the society.

CD writers are the wave of the future. What is a CD writer one may ask? A CD writer is simply a technology device that allow one to record information onto a CD and then the CD is used for storage instead of using the hard drive. Why would you want something that records CDs? CD-RWs are a great storage device. You can create valuable backup volumes for your important files and programs, share your work with friends and colleagues in an easy-to-manage and familiar format, and make mixed audio CDs from CDs in your personal collection or even from old tapes and vinyl. How much does something like this cost? Below you will find a chart showing different CD writers available, the cost, and other valuable information. CD writers are not for everybody, but they are worth checking into.

Est. price Throughput test results Drive type Drive interface OS supported Warranty Disks/cartridges included

Hi-Val Internal IDE $300 18K/sec Internal EIDE/ATAPI Windows 95, 98, NT 4.0 12 mo. 1 CD-RW

HP SureStore CD-Writer Plus 8100i $399 35K/sec. Internal EIDE/ATAPI Windows 95, 98, NT 4.0 12 mo. 1 CD-R; 1 CD-RW

MicroSolutions backpack cd-rewriter 2X6 $499 15K/sec External standard parallel Windows 95, 98, NT 4.0 12 mo. none

Philips PCA362RW Kit $369 18K/sec Internal EIDE Windows 95, 98, NT 4.0 12 mo. 1 CD-RW

Ricoh MediaMaster External CD-RW 2X/6X Drive $599 14K/sec External SCSI-2 Windows 95, 98, NT 4.0; Mac OS 12 mo. 1 CD-R; 1 CD-RW

Another new technological device for computers is the DVD player. DVD stands for digital video drive. Recall that VCR sitting in your den? VCRs are quickly diminishing as DVD players are beginning to take over. Why the DVD player? A DVD player has better graphics then does a VCR. The DVD also takes up less space then videotapes since they are on a CD. With the DVD player, one can play games or simply watch movies from their very own computer. Prices for DVD players vary depending upon brand, speed, and other determining factors. DVD players range between $179.94 to $1,299.95. As well as DVD players for the computer, DVD players for the TV are becoming available. Some people will want a DVD player for their computer while others will want it for their TV and still others will stick with their VCRs for the time being. Below you will find a list of available DVD players and their cost.

Oritron-DVD player PYD200 $179.94

Toshiba-DVD player RC522OP $249.94

GE –DVD player GE11059 $199.94

JVC-DVD Changer XVM555BK $349.95

CABLE MODEMS–Wave of the Future? If you think about the future, what is the first thing that comes to mind? Well, in the minds of most people the word computer or Internet will come to mind. Since the introduction of PC’s in the late seventies and early eighties, the technology involved in computers has grown exponentially. The internet, which came into widespread use only five or six years ago has grown unimaginably. Anybody can find virtually anything they want over the Internet. The first way to access the internet was through dial up telephone modems brought through ISP’s such as Prodigy, AOL, Compuserv and many other providers. These providers were slow and sometimes you couldn’t even get through the busy phone lines. the phone modem industry has grown greatly since then, but it still has its flaws. ISDN’s have become popular in the business world and provide better service than telephone modems, but they also have their flaws. The wave of the future as far as Internet access is concerned is cable modems. Cable modems are faster, more efficient, more cost efficient and easier to use than any other Internet access that’s ever been introduced. WHAT IS A CABLE MODEM? A cable modem is “a device that allows high speed data access (such as to the Internet\_ via a cable TV network.” In other words rather than running the Internet through the telephone, it will be run through cable TV. HOW DO CABLE MODEMS WORK? There are five main components to the operation of cable modems: 1. the headend 2. the trunk cable 3. the distribution cable in the neighborhood 4. the drop cable to the home and in house wiring 5. the terminal equipment. It’s really a fairly simple process. A cable modem network is described as a “tree and branch” network. This means there is a main station (headend\_ that has a trunk cable that distributes feeder cables to all of the neighborhoods. These feeder cables branch off into drop cables that go into the homes of the individuals, where it is then wired to the terminal equipment. WHAT ARE THE ADVANTAGES? There are many advantages to using the modem over a phone modem or an ISDN connection. Ther first advantage and probably the most popular and important to the average consumer is the speed of the modem. How many times have you found yourself staring at you monitor, waiting for your computer to download a file. Those days are over. A good modem in today’s computer is 56Kbps. The cable modems that are being manufactured now range from, at the low end, 500Kbps to, at the high end, 36Mbps. Most of the cable modems being produced right now operate at 1.54Mbps upstream to 10Mbps downstream. Transfer Rate for a 10Mb File: MODEM SPEED/TYPE TRANSFER TIME 9.6Kbps telephone modem 2.3 hours 14.4Kbps telephone modem 1.5 hours 28.8Kbps telephone modem 46 minutes 56Kbps telephone modem 24 minutes 128Kbps ISDN connection 10 minutes 1.54Mbps T-1 connection 52 seconds 4Mbps cable modem 20 seconds 10Mbps cable modem 8 seconds This is a brief example of how fast a cable modem is in comparison to the connections we use today. This doesn’t even include the 36Mbps cable modem that has been introduced. Another advantage is the imporved service that the cable modem provides over the traditional phone modem. The bandwidth of the cable is 6MHz, which is much larger than that of a telephone modem. This allows more Internet lines to be run through it. Most of the producers of cable modems can ensure that no more than 80% of the lines are being used, and if that much is being used then they can open up more unused lines. This would make it where the user would never get a “busy signal” as you do sometimes with telephone modems. Also the cost of the cable modems, especiall in LAN’S AND WAN’s would be much lower. With telephone modems and ISDN connections, consumers are charged for every minute they are online. With a cable modem there is a flat, monthly rate, usually around $40 a month. THE DISADVANTAGES? Are there any disadvantages to this? Well there are a couple of minor disadvantages. Since the network would be a “tree and branch” network, any interference in the network would be combined with all other noise and could make for a noisy connection, and with the large bandwidth of the network there will be a little more noise. However, the producers have done something to fight this. They have developed two main modulation schemes, QAM, which sends data at up to 10Mbps and QPSK, which works at up to 36Mbps. The QAM is more popular right now, because it minimizes the noise produced by the network. While the QPSK is much faster, it is “more robust scheme than higher order modulation techniques in a noisty environment.” Also since there are so many different “frequencies” inside the cable, if a noisy connection is detected, it can automatically be switched to one with minimal noise. We may just have to settle for our cable modem being 1000 times faster rather than 3000 times. COSTS? The big question that everyone is going to ask is, how much. How can I get this kind of revolutionary service at a price I can afford? You have to look at it overall. It costs around $200 for the modem itself and about $100 to install it. These prices may sound high but when you can pay a monthly rate for unlimited service, you are going to save a lot of money in the long run. This will especially benefit the people in the telecommuting business. Their cost would be approximately three times less than that of an ISBN network of a telephone modem network. WILL IT CATCH ON? Will this new technology catch on nationwide as well as telephone modems have? If you ask me, I would say definitely. These modems will probably catch on at first, to LAN’s such as college campuses. These networks will see the greatest advantage in cost. Even if, for an individual user, the cost is a little higher it’s worth it. Plus, after a whil, just like all other computer hardware, the price will go down. The cable modem is definitely the wave of the future. It’s already beginning to catch on in business’s around the world and will soon be just another thing that people are expected to have on their computer Sources: SPEED DEMON CABLE MODEM. www.speed-demon.com BLAZE NET EXPRESS SPEED. www. yorkconnection.blazenet.net/blazenet/public/blazenetexpress/speed.htm CABLE MODEMS. www.cablemodems.com

Ever wanted a cheaper way to capture a memory or advertise in a newsletter or paper? How about having acquiring instant digital images without a scanner? If any of this applies to you, follow this article carefully. You will learn what are digital cameras, similarities and differences between digital cameras and film cameras, and their advantages and disadvantages over the film camera. Digital Cameras: loss of control or flash of the future? What are digital cameras? Digital cameras as cameras that use CCD’s (charged couple devices) to change light into electric signals. The more light that a CCD gets, the more electricity. The CCD is a chip with many resisters on the surface. Using a shutter and a lense like a film camera, digital cameras store images on digital storage media instead of on film. The specifications of entry level digital cameras (digital cameras around USD1000 or less) are very limited. They have a film ISO(film speed rating) of about 80-100. This speed is very slow therefore a flash is needed indoors or in lower light conditions all of the time. The average resolution of a picture is about 480×600 or a 300, 000 pixels. Professional digital cameras, on the other hand, are very impressive. They have the features of a single lens reflex camera, or SLR. This gives a lot of control. The average resolution of images are about 3, 000, 000 pixels, quite similar to the resolution of film which is 18, 000, 000 pixels. Although the image quality is acceptable at a normal size, when enlarged, rough edges start to show up. The ISO equivalent is about ISO 800. This speed is very fast even for indoor light conditions. Unfortunately, there is a price to pay for all of this performance. Unless you are a serious and wealthy commercial photographer, USD 36, 000 is still a very heavy blow to your bank account. There are advantages of entry level digital cameras. For one thing, processing is cheap and fast. Processing takes at least and hour for film and costs about 3-4 dollars. This is excluding film. The processing of digital camera images takes around 20 minutes depending the speed of the communications port and the computer. There is no cost for film. Also, when images are needed on computer, you don’t need to scan your images in. The images are already in digital format. This is very useful for real estate agents, newsletter photographers, Internet photos, advertising, insurance, and newspaper photographers because the resolution of the images is not a big issue in these applications. If you are willing to pay the price for professional digital cameras, you will not be disappointed. The image quality of professional digital photos meets the requirements for pictures. Due to the use of multiple CCD’s and merging to one image, the resolution of the images from a professional digital camera is no less than 6, 000, 000 pixels. This is about a third of the quality of normal film images. Processing of digital images is also much easier to handle and process. Removable storage media also removes limits of picture storage. Having the same camera body as off the shelf SLR’s, use of these cameras are very easy to control. The fast film speed equivalent also offers necessary speed for indoor applications that require more costly film on normal cameras. Professional photographers could benefit greatly from this new technology. Although entry level digital cameras are much more affordable and are more practical for constant use, they still have drawbacks. Their slow film speed and low resolution take the biggest blows. The slow film speed cripples the digital camera because that with a slow film speed, distracting and annoying flashes are constantly required. The resolution of the images are too poor for most applications. There is no control for shutter speed or aperture to counter light and speed effects beyond the correction of a flash. Without interchangeable memory, the picture capacity of entry level digital cameras are greatly limited. Computer storage space is also consumed to store images. Professional digital cameras also have drawbacks. A very big issue is cost. At a cost starting around 16, 000 USD, a great initial investment is required to reap the benefits of being digital. Although professional digital cameras accommodate reusable interchangeable memory, each nonvolatile RAM card costs from 300 USD and up. It can take up to three hours to upload 24 pictures to a computer, depending on the transfer rate of the camera and the computer. Each one of those pictures takes 3 megabytes of disk space which equals 72 megabytes for a whole set. An average hard disk drive has about 1, 600 megabytes, out of which an average of 300 megabytes is already being used. This brings up the problem of buying expensive new storage media. The physical size of the camera also makes it very bulky and occasionally hard to handle. The temporary downfall of the digital camera can be summed up in one sentence: a $3 Kodak Funsaver camera have better image quality than a $36, 000 digital camera. We can see that digital cameras are not perfect. Neither are film cameras. The film and processing is not cheap. At about $7 for 24 pictures, we can see why people are still buying digital cameras. If the images are needed in digital format, film camera pictures have to be laboriously scanned into a computer. The birth of digital cameras does not mean the death of film. Film cameras are still much cheaper, initially. The resolution of film is still much better than an image from a digital camera. The battery power usage is much lower that digital cameras making it easier to keep shooting without replacing. Compared to removable media of professional cameras, film is still cheaper. They are light and portable and don’t require a computer on constant standby. Now that you have seen the advantages and disadvantages of film and digital, do not take on a solid opinion. Each have their own benefits, different applications can benefit from one of the two main kinds of cameras. As said before, entry level digital cameras are most practical from high use applications where resolution is not a big issue. Professional digital cameras are probably most practical for a professional photographer who need instantly processed images cheaply and on a computer. Film allows more unspecialized people like the common shutter bug or family member who wants to store good memories. To conclude this presentation, digital cameras will become as cheap and as good as film cameras are right now. The keyword is eventually. Digital cameras still have a long way to go before they can seriously rival film.

Computer Technology will keep affecting our lives in many ways. Such technological advances will be better than others. But it will all affect us in one way or another. Also such advances in technology will revolutionize the future.