

Case assignement essay

Business, Strategy



If you cannot think of a strategy for answering this question, you may want to consider weaving all or some of the Case Learning Outcomes into your response by addressing the following:

1. What are the main components of personal computers used in an office environment?
2. How has the cost of computers used in an office changed over the past 30 – 40 years? Which main component of the computer is driving this change?
3. What has been the result of this cost change in the last 20 years?
4. What limits the price from changing drastically in the future?
5. What is e-waste and why is it a problem?
6. What new technology or change in IT concepts is evolving to reduce e-waste?

Module Number 2 – Case Computer Hardware Introduction

Personal computers and mobile devices are used for business and personal use around the world today and is continuing to grow expeditiously every year.

As manufacturers continue finding new ways of adding processor power to the microchips that process data on these devices, we will continue to see prices drop for these devices. As the availability of the personal computer and mobile devices becomes affordable across the globe, we will have to find a way to handle the environmental issues that these devices cause. If history tells us anything, we are just starting the journey with both the personal computer and mobile devices, one of these days, everyone will utilize a computer or mobile device in their everyday lives. As we evolve into a true technology driven world we will have to find a way to recycle these components and reduce the e-waste hazards we have in our landfills.

Evolution of the Computer The computer as we know today started out as a specialized machine that used punch cards to input computer programs. This

computer was big and bulky and it processed programs on organs and textile looms.

Today, a much smaller version of these types of computers is still used as voting machines. Some machines had software code ingrained on the circuit board, as changes were needed, they were made manually by changing the leads going to the circuit board. By the 1950s IBM created transistorized machines that were used as mainframe computers in the commercial space.

These computers were able to multicast, and some even had virtual memory. The first airline reservation system appeared in 1959. IBM dominated the mainframe computer arena from the mid-1950s into the 1970s. By the mid-1970s personal computers were fully integrated into businesses and ran DOS, a text based command language operating system. As Microsoft introduced the first Windows Operating System, IBM was also producing microprocessors. These companies became two of the major influential businesses of the personal computer as we know today.

By the late 1970s software tools like Word Processors and Spreadsheets became valuable to both the business and home users. The Enterprise Internet Computer era was in full swing by the mid-1980s, with businesses turning to network standards to link different type and brands of computer hardware into enterprise-wide networks, creating an easy way for information to flow, not only across the enterprise but also to other organizations. Today, organizations link servers, desktops, phones, integrated software and even mobile devices together, creating both private and public infrastructures (Lauded & Lauded 2012). Personal Computer

Components Computer hardware provides the underlying physical foundation for today's IT infrastructure. There are several major components that make a computer, it all starts with the Central Processing Unit (CPU) that manipulates data, and controls the other parts of the computer system. Input devices are keyboards, computer mouse, and touch screens that are used to input data into the computer system.

Primary storage is where data and program instructions are temporarily stored during processing. Internal primary storage/memory is often called RAM (Random-Access Memory) data is stored in RAM until the computer no longer needs the data or the computer power is turned off. Secondary storage is considered long term storage and houses data that is saved even with the power turned off. The output devices are printers and monitors which display data after it has been processed. And communication devices, such as Network Interface Cards that send and receive information across the network (Lauded & Lauded 2012). Technological advances have changed the personal computer As technology evolved over the past 30 years, so has hardware design, reducing the size Of hardware components and at the same time increasing the performance of these components. With the ability to pack more technology into smaller spaces, the cost of these components has decreased as well.

When you compare the first hard drive that was produced in the early asses, which had 5 megabytes of memory that can store a 5 minute IMP song to today's hard drives that now have up to 2 Terabytes of memory or 40, 000 5 minute IMP songs, it's the technology that has drastically increased (Lauded

& Lauded 2012). Over the past 50 years Computer memory and storage pricing has continued to decline due to technological improvements and manufacturing outputs. It's hard to predict the next 10 years, but if the trend continues, we are looking at a reduction of 10 to 20 percent across the board for all computer components (Harvard, NINA). Faster and Cheaper computers
The first microprocessor chip was introduced in 1959 and is still the smallest manufacturer costs per component.

“ Moor's Law ' named after Gordon Moore, the director of the Fairchild Semiconductors R&D lab that made the iris microprocessor chip stated that microchips double in speed every 1 8 months and this continues today with the most chips processing speed doubling in the same amount of time and in turn reducing the cost of making these chips as well (Gallagher, 2012). As the silicon space inside of microchips is reduced it will be harder to double in speed so pricing should plateau. When predicting the future, you have to look at what faster and cheaper components have done to the price of the personal computer.

Once, a very expensive device to own a computer today has become very inexpensive; just kook at the latest phone release, where over 4 million devices were purchased or ordered within the first week of the new phone's release date. Electronic Waste Electronic waste is discarded electrical or electronic devices. All electronic scrap components such as CRT monitors, cell phones, television sets, and refrigerators contain some form Of contaminants like lead cadmium, beryllium, or predominated flame retardants.

Recycling of E-waste material brings significant risk to workers and communities across the globe. Special care has to be taken to avoid unsafe exposure in recycling operations. The extreme amount of lead in electronics alone cause damage in the central and peripheral nervous systems, the blood and the kidneys. With only 13% of electronic waste being recycled today we all need to be concerned.

Based on a 2008 study by the US Government some recyclers ship e-waste to third world countries under the pretext of charity, claiming that these are “ donations” and they are helping bring technology to developing nations (Levin, NINA). Fertilization of hardware has helped reduce the amount of computer components that being recycled or dispersed in the landfills. Us Mary With the increase in speed and power from smaller components, today’s computers will continue to shrink in size and cost over the next 10 years.