Macintosh Vs. Ibm Essay, Research Paper

The IBM and Macintosh computers have been in competition with each other for years, and each

of them have their strong points. They both had their own ideas about where they should go in

the personal computer market. They also had many developments, which propelled themselves

over the other.

It all started when Thomas John Watson became president of Computing Tabulating Recording

in 1914, and in 1924 he renamed it to International Business Machines Corporation. He

eventually widened the company lines to include electronic computers, which was extremely new

in those days. In 1975 IBM introduced their first personal computer (PC) which was called the

Model 5100. It carried a price tag of about $9,000 which caused it to be out of the main stream

of personal computers, even though their first computer did not get off to as big as a start they

had hoped it did not stop them from continuing on. Later on IBM teamed up with Microsoft to

create an operating system to run their new computers, because their software division was not

able to meet a deadline. They also teamed up with Intel to supply its chips for the first IBM

personal computer. When the personal computer hit the market it was a major hit and IBM

became a strong power in electronic computers. Phoenix Technologies went through published

documentation to figure out the internal operating system (BIOS) in the IBM. In turn, they

designed a BIOS of their own which could be used with IBM computers. It stood up in courts and

now with a non IBM BIOS, the clone was created. Many manufacturers jumped in and started

making their own IBM Compatible computers, and IBM eventually lost a big share in the desktop

computers.

While IBM was just getting started in the personal computer market, Apple was also just getting

on its feet. It was founded by Steve Jobs and Steve Wozniak in 1976. They were both college

drop outs, Steve Jobs out of Reed College in Oregon and Steve Wozniak from the University of

Colorado. They ended up in Silicon Valley, which is located in northern California near San

Francisco. Wozniak was the person with the brains and Jobs was the one who put it all together.

For about $700 someone could buy a computer that they put together, which was called the

Apple I. They hired a multimillionaire, Armas Clifford Markkula, a 33 year old as the chief

executive in 1977. In the mean time Wozniak was working at Hewlett Packard until Markkula

encouraged him to quit his job with them, and to focus his attention on Apple. Apple went public

in 1977, for about $25 a share. In 1977 the Apple II was introduced which set the standard for

many of the microcomputers to follow, including the IBM PC.

The Macintosh and IBM computer have been in competition ever since they put out their first

personal computers. In 1980, the personal computer world was dominated by two types of

computer systems. One was the Apple II, which had a huge group of loyal users, and they also

had a large group of people developing software for the Apple II. The other system was the IBM-

Compatible, which for the most part all used the same software and plug in hardware. In 1983

Apple sold over $1 billion in computers and hardware. Now Apple was trying to appeal more to

the business world so they designed the Lisa computer that was a prototype for the Macintosh

and it cost around $10,000. It featured a never before seen graphical interface and the mouse,

which are as common as any other component on the computer today. IBM introduced a

spreadsheet program called Lotus 1-2-3, which caused anticipated sales of the Lisa computer to

drop to nearly half.

In order for Apple to compete with the IBM-Compatible they had to change some things around.

Jobs headed the development of the Macintosh, with the goal in mind of a computer for the rest

of us. He wanted it to be easily set up out of the box and up in running in 15 minutes. The

developers of the Macintosh made it so that you could not upgrade it for they did not think that

you needed to open your computer. In 1984, they launched the Macintosh for $2,495. The

advertisements for it cost around $500,000 and more than $1.5 million to play it on Super Bowl

Sunday in 1984. They decided later that if they wanted to keep up with IBM they would have to

make the Macintosh cheaper and easier to upgrade in order to appeal to the business market. In

1991 Apple s desktop computing business was going down hill, and Motorola, who was their chip

manufacturer, was being known as the company that was always one step behind Intel. So

Apple lost developers for their personal computer.

This is the label on many of the current chips that are being shipped today.

One thing that is different between the IBM and Macintosh is the type of CPU architecture they

are using. The IBM computers have been using the same chip design as it did when it first

created the personal computer. They created their systems around a CPU design Intel created,

which used an architecture called CISC (Complex Instruction Set Computing). This also allowed

the IBM computer to be compatible through out the years with the older systems. For instance if

you had some sort of typing programming that was on an IBM-Compatible computer that had a

286-12 CPU, you could run that same exact software on one of your newest Pentiums today. So

even after 10 years the same software could be used. This also has it down sides, because that

means we have been using an internal CPU architecture that is at least 20 years old. One thing

that IBM users can look forward to is the advancements that Intel is making with it s CPUs. One

of the latest things that has hit the market is MMX, which allows programs that are more

graphically inclined to run faster, as well as programs that use sound. They already have chips

in the making going by the code name Klamath. These will be a cross form of the current

Pentium Pro chips and the Pentium MMX chips. They should be coming out in 1998, and will

have a MHz rating up to 400. Right now the MMX chips are shipping at 200 MHz and will soon

have one at 233 MHz. Intel is moving very swiftly in bringing us the top of the line technology.

Apple decided to go with a different CPU architecture. IBM created a RISC (Reduced Instruction

Set Computing) CPU that could run faster than the CISC model of the same MHz rating, so a

RISC chip with a MHz rating of 100 could run just as fast as a CISC chip with MHz rating of 133.

Now with the definitions of CISC and RISC you would think that the RISC chip has fewer

instructions, and actually in fact it is just the opposite, but since it started out with fewer

instructions then the CISC chip it kept that name. Now IBM did not want to put it into their own

personal computers because of the compatibility issues. The computer would not be able to use

the current hardware or software, that was being made for the IBM-Compatible computers. So

IBM sought out a company that would be willing to buy their RISC chip, and Apple was the

company they found. Motorola had previously been designing the chips for Apple, but they were

not as fast as IBM so the Macintosh development slowed down in comparison to IBM. IBM could

design RISC chips for Apple with no problem. With this Apple needed to get developers to make

applications made to run specifically for the RISC chip. IBM decided to team up with Motorola

because they were not equipped to put out chips in high volume like Apple needed. Apple had

already been creating a mother board based on the Motorola chip design, so with IBM and

Motorola teaming up they did not have to redesign their mother boards. So now an Apple

computer could run faster than an IBM, in a certain sense. A Macintosh Quadra 40 MHz using

Motorola 68040 chip would be faster than most 486DX-66 MHz CPUs. The reason being is that

the Macintosh computer was totally design to run with each other. So the Operating System in

the Macintosh would take advantage of the hardware s capabilities as well as the hardware

taking advantage of the Operating System. So with this interconnected system it would be faster

than a system not made to take advantage of every little thing in a piece of hardware.

Apple Macintosh Mouse

With the both companies in heated competition, the pressure was on for them to come out with

things that the other did not have. Apple came through very strongly in this area. They created

many devices that are used in many computers today. In 1984 Apple created the first GUI

(Graphical User Interface) this also brought about folders or directories, long file names, drag

and drop, and the trash can. All these devices are used in the more popular operating system

for the IBM-Compatible computer called Windows 95. Apple also created the mouse, which is as

common as the keyboard. One thing that helps the IBM-Compatible in the hardware area, is all

the third party developers. With the Apple computer, only Apple had the rights to develop

hardware for their computers. With IBM-Compatibles anyone can develop hardware for it, thus

we have many innovative accessories and hardware for the IBM-compatibles. One of the more

interesting devices for the IBM-compatible computers, that was featured at the 1997 Comdex

show in Vegas was a speaker system. It looks like a giant plastic dome that is placed above

your head pointing down towards you, and allows stereo sound to be heard only by the person

directly underneath it. One company that was showing it in action was Creative Labs, which is a

maker of Sound Cards and usually sets the standard for them. They had many computers

networked together and were running a popular game of 1996 called Quake, which is a first

person action game. They had put the dome shaped speakers above each computer station and

it allowed each player to hear what was going on around them, but it would not make any outside

noise or interfere with the person playing right next to them.

Installing a card can be very easy

One of the latest things with computers these days is Plug n Play. It was meant to alleviate the

fear of people upgrading their computer themselves, even though some people will always pay

someone big time money to do it. If you are afraid of opening your computer it is strongly

suggested that you have a professional do it, for they have been doing that sort of thing for

years, and they know exactly what they are doing as well as what to do if they encounter any

problems that are uncommon to the regular consumer. The deal with Plug n Play is that it

would allow you to install a new sound card or some other plug in card and then just turn on your

computer with out you having to change any jumpers or configure it in any way. The Macintosh

computer and the Windows 95 operating system both have this feature built into it as well as

some of the newer IBM-Compatible BIOS. There have been draw backs to it, for some of the

people that prefer to configure it themselves for the software used to configure the card might

not be able to use a configuration you wish to use.

Apple computers have many things that already come with it, that the IBM-Compatibles do not

always have. For instance they come with a 16-bit sound card, that has voice recognition built

into it. With the voice recognition the operating system was designed to use it in every way you

could think of, you could do anything without typing or clicking on a thing. For instance you

could tell it to Shut Down and it will go through and turn off the computer, or you could write a

letter to a long lost relative just by speaking. The Macintosh computer was designed so that

everything you did was made as easy as possible, so that is why all the software has to be

redone when they add new hardware. If you wanted to eject a disk you stuck into it, you went up

into the pull down menus and told it to eject disk.” You could also shut off the computer from

the pull down menus. This is basically the total opposite of the IBM-Compatible computers. To

eject the disk you just plainly press the little button on the disk drive, and if you wanted to turn off

the computer you just press the power button. The Macintosh computer could run into problems,

say if you had a disk in there and somehow the computer locked up or the power was off, you

would not be able to get that disk out of there. Some of the other things that the latest Macintosh

computers have been coming with are networking cards built into it already. If you wanted to

play a game or transfer files with a friend, you just grabbed a cord and plugged the two

computers together and then you are off. You could also do video conferencing and send email

over the network, as well.

With the way the Macintosh computer was designed you cannot upgrade the sound card for

everything is built into the system, but with an IBM-Compatible computer you could easily take

out one card and put in another. Anything that you add on to the Macintosh has to be put on the

outside, like CD-ROMs and Modems. Also because the Operating System of the Macintosh

relies on the computer’s hardware and was designed for that particular hardware, if you ever

upgrade it you have to upgrade the operating system as well as many hardware components and

software that were made for that particular model. That is one reason many of the big time

business users would not want to buy a Macintosh for they would want their investment to last

awhile and if they needed to they would want to upgrade their systems as cheaply as possible

and the IBM-Compatible made it cheap for them to do so. The Macintosh computer itself usually

costs about two times as much as a comparable IBM computer. They also tend to confuse their

customers by bringing out many new models out all the time. For instance in 1993 alone, Apple

introduced 17 different models of their Macintosh computer.

Software for the Apple computers is harder to come by then for the IBM-compatible computer.

Apple controls all the software for their computers and will not license it to any other developer.

So you do not have the variety you do with the IBM computers. A big thing that has become

very popular in the last few years is something called the Internet. Almost everyone has

experienced the internet in some form or the other. You can almost do anything you wanted

over the internet. From writing a message to some distant relative and have it arrive to that

person in minutes, or playing a chess game with someone from Russia. You can also get any

program you are looking for over the internet, and many of these programs are usually only for

the IBM-compatible computer for there is more people with an IBM computer and thus more

people making applications and games for the IBM computer. So basically there is just a ton of

software out there for people who own an IBM-compatible computer.

With the IBM-compatible computer you can continue to upgrade it, even someone who bought a

computer five years ago could have upgraded it so that it is just as fast as any computer of

today, but with the Macintosh you basically would have to buy a new system. Also since IBM

had used a third-party for its operating system other companies could license the operating

system to make their own compatible operating systems, as well as any other software for it.

Compatible hardware could easily be assembled. As well as peripherals and components that

will improve the IBM compatible computer. From some of the common components, like CD-

ROMs, Modems, Sound Cards, and Printers. You even have a choice from about 20 different

styles of mice that you could use on your system, from three basic groups: Roller, Track balls,

and Touch Pads. They have some other ones, like one that clips onto your monitor and shoots

infrared beams across the screen to detect movements by your finger, and so it basically turns

your monitor into a touch screen. As well as hand held ones that move the cursor based on the

position of your hand.

The Apple computer has usually always appealed to the school systems. With the IBM-

compatible computers going more towards businesses and personal use. The main reasons

behind this are that the Apple had many types of software directed towards children and helping

them learn. They were also easier to use so that appealed to the school system, for they would

be able to have children that are five years old be able to use a computer with no problem. The

IBM computer went more with businesses, because of its ability to be upgraded and they would

be able to get longer use out of it. They could more easily adapt an IBM-compatible computer to

their way of doing things, just because of the many different software out there as well as its

ease of adding or upgrading it capabilities. The IBM-compatible computers have been becoming

increasingly more popular with the school systems, because of Apple going down hill and having

less and less software available for it.

The IBM and Macintosh computers have been in competition with each other for years, and each

of them have their strong points. Apple dominated in the personal computer market when it first

started, but when the IBM clone was created that started its downfall. Some of Apple s earlier

decisions caused it to lose in the battle with IBM as well. Motorola as its chip manufacturer,

caused them to be one step behind the Intel based IBM-compatibles. Not licensing out its

software so that third parties could create software for it, was also a down fall for it. Now, that

the IBM-compatible computer has a strong support it is very unlikely that Apple will be able to

bring back a large user group for its personal computer, even though their computers are faster.