

Five ages of computing. For this discussion we will only consider the last 3.  
First age - computing devices created - primitive, experimental.  
Second age - actual computers used in business and science. IBM dominates.

**Third age - Personal computing becomes affordable.**

**1979 -**

TRS 80

Atari 400/800

Timex/Sinclair

**1980 TRS 80 III**

**1981**

Commodore Vic 20

Apple III

Timex Z81

Osborne

TI 99/4A

**1982**

Kapro

Timex 1000

Timex Spectrum

Commodore 64

Franklin Ace

**1983 - MS-DOS developed**

Compaq

Apple Lisa

Mattel Aquarius

Coleco Adam

Timex 1500 (Sinclair QL)

TI Professional

TRS 80 Mod 100 (also used in Kyotronic, Olivetti and NEC)

Government allows Unix (developed by AT&T to run phone, bank and Arpanet systems - Arpanet became the 'internet') to be sold commercially. Would eventually dominate the industry.

**1984**

Tandy

Apple 2C

IBM PCjr - (formerly TI 99/4A)

**1985**

Atari ST

Amiga

Kapro

AT&T PC

MS introduces Win 1.0, an extension of MS-DOS.  
User interface and 'screen displays' licensed from Apple.

1987 - Win 2.0, Excel, MS Word

1990

Introduction of Win 3. Considered to be first complete Windows operating system.  
MS and IBM form joint venture to develop OS2 which was to be more powerful and replace Windows.  
OS2 was not to be DOS based as they believed Windows was limiting the technology. OS2 eventually became Windows NT.

#### **Fourth age - Windows decreases fragmentation and dominates personal computing**

1995

MS introduces BOB operating system in March. This was intended to merge NT with Win 3.1. Included a new graphic interface (house with rooms - icons represented programs. Gateway version was a Barn.)  
Introduced "personal assistants" (moved to Office), "Rover" (became MS Search then Bing), special forms such as "letter writer" (became MS Works then Office) and "comic sans" font was designed especially for BOB.

Drawbacks included price (raised price of computer by \$150, required sound card and significant amount of ram to run, charged for email. (This was not unusual at the time.)

Time Magazine described it as one of the 50 worst inventions of all time. CNET claimed it was the worst OS ever. PC Magazine said it was one of the worst tech products ever and that people did not want 'clip art' all over their computer screen. "People want their command lines". Using a mouse and 'double clicking' was considered a gimmick used by Apple, Atari and Commodore not something a 'real' computer had.

BOB was forerunner to concept of touch screens. BOB sold less than 58,000 copies in five months and was cancelled.

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MS strips out all of new GUI (BOB) and re-introduces the product as Win 95. The claim was Win 95 would merge Win 3.1 with NT. As of 2009 they still have not been merged and by this time 3 different versions of Windows exist (Consumer, Professional and RT). Professional was developed and sold to government agencies and large corporations only.

Dec 7, 1995 - In a speech to all MS employees, Bill Gates directed MS researchers to concentrate on the internet and smart devices as that was the future of computing.

Win95 was huge success. Sales were driven by the free software included - IE, (crude) word processor, etc. At that time consumers had to buy Netscape, etc. in order to access the internet. (Free was better.)

2001

MS introduces Win XP (EXperience). XP was built on the NT kernel and used C++ for programming. XP was the most widely used version of Windows appearing on 400 million machines. Considered by most

to be the best version of Windows. MS continued to sell XP to 'preferred' customers through 2009 and will support the product, for these customers, through 2014 even though support has ended for basic consumers.

XP was smaller than previous iterations of Windows and this was noticed by reviewers. On the OS disc people received, there was extra space. After the initial offerings, MS decided to scramble the entire BOB OS and include it on each XP disc to fill the extra space. Unfortunately, when installing, all of this crap would be added to the hard drive even though it was not capable of running. Complaints then began about how bloated XP was as the average hard drive was only 250 mb.

### 2006-2007

By this time, the core of Windows OS is 20+ years old. Technology had leaped so far ahead of the core system that hacking Windows threatened to bring down MS dominance. Businesses lost critical data and sued, consumers lacked confidence, governments begin limiting use of Windows products. US military creates 2 battalions of programmers (Air Force/Navy) to counter dangers to US security and economy as Windows was dominant OS.

MS releases Vista to counter the problems. Unfortunately they release 6 different versions and two sub-versions of each one.

Vista (sold outside the US)

Vista Home (basic)

Vista Home (premium)

Vista Business (premium+, for mom & pop businesses)

Vista Enterprise (for corporations)

Vista Ultimate (?)

With the double versions of each edition this became a nightmare for programmers. MS released a list of programs that would run on all of the editions. Huge embarrassment as some versions would not run Office/Media Player/etc.

By this time there are now more than 50 different versions of Windows. Fragmented the industry - programmers switch to IOS, Unix and Android. The market for PC games and programs begins to shrink. MS wants games played on Xbox not computers. (Lower system requirements would result in cheaper machines and would drive sales - had reverse effect. Young people played games on Xbox but had no interest in buying a Win machine.) Where there had been stores that only sold software - it was reduced to a single aisle in Best Buy.

US government begins weaning off of Windows. Main data and programming to be moved to Unix systems. Social Security Admin. is the first to switch.

MS board and investors are concerned that MS may be imploding - demand that this be fixed.

### Fifth age - Connectivity begins

#### 2008

At this time IE had 86% of the browser market. Vista merges abilities of Xbox, Zune and PC - first 'connectivity' in Win system. Google launches Chrome.

## 2009

Win 7 released in 6 major editions and 32 variants.

Starter - is world edition

Home Basic (US)

Home Premium (US)

Professional (for mom & pop shops)

Enterprise (for corporations)

The 32 variants were released with items eliminated. For example, some did not include Media Player, some had Office included others did not. This was done to placate PC manufacturers who needed low cost versions. MS had increased the price of the OS trying to satisfy investors.

Consumers begin turning away from Windows. Market totally fragmented. HP and Lenovo release Linux machines trying to retain customers.

MS announces they are working on a new OS that will be 'completely connected'. (Win8)

## 2010

MS spends \$1 billion developing "Kin" phones. Smart, social networking phones. Introduced in April

2010 - they were discontinued in December of the same year.

2011 - MS ends Zune program (devices and market)- effectually ending 'connectivity' experiment. Apple begins sharing between all of their devices.

## 2012

Win 8 released.

Win 8 was to unify all of Windows - one system everywhere. Legacy consumers complained so much prior to the release that Win 8 became a dual system. In addition to this, Win 8 was released in 4 different versions; one of these (RT) cannot run most Windows programs (the Widows programs found on the machine were specifically written for the machine.)

MS announces that Win 7 phones would not be compatible with Win 8. Sales of Win 8, tablets and phones are a disaster.

NASA announces that it is eliminating Windows and switching everything to Linux.

By this point there are more than 100 versions of Windows. MS announces a new program that will discontinue support for most versions. Future support and updates will be on a subscription basis. (As of 5-14-13 the support cost (price) has not yet been determined. It has been suggested that there will be an annual fee or a monthly subscription available but it has not been confirmed.)

WSJ headline - **"iPhone is Worth More Than all of Microsoft"** - The article created a panic among investors as WSJ reported that sales of the iPhone in the first quarter of 2012 exceeded the sales of ALL MS products in the same period. Industry analysts and financial analysts suggest that MS may not make it in OS. Financial analysts issue sell order for Widows stock. Forbes extremely critical of the management of the company.

At the same time, an MS programmer publishes a critical description of MS. He states that MS has become like Nike, GM or the record industry where everything is geared to promote the next, new product not to improve and refine the present system. He reveals that beginning in 2010, there is a huge exodus of talented programmers (going to Google and Apple) and that MS is more concerned with stock prices than with tech.

MS board openly splits with half suggesting that they get out of OS and concentrate on the entertainment division. (Xbox, movie production, TV series). Entertainment division issues apps for Android and IOS to control Xbox from those devices. (Cannot control Xbox from MS devices with exception of some of the phones!)

Board orders outside analysis of MS situation. Poll of 35 and under indicates little interest in any Windows product. Sales of surface tablets for the year less than iPad sales in average 2 week period. Of 3.5 billion computers used daily only 700 million are Windows (20%). Further, of the 700 million, the majority are legacy machines in large corporations and actual consumer use is estimated at only 30 to 50 million. (This stunned the board as there were approximately 28 million iPads in use at the same time.) Officially MS claims there are 60 to 80 million individual users worldwide. (Note: MS spokesman recently claimed that Win8 sold 100 million copies - this is similar to the Warner Bros. claim about ET on the 2600 where they sold more copies than they had produced machines! HP and tech industry analysts suggest it is closer to 22 million copies including tablets and phones.)

The final blow in the report indicated that in the four years since Chrome had been released, Chrome usage went from 0% to 50+% while IE dropped from 86% to 13% (Firefox was the second most popular browser at 36%.)

### 2013

"Desk top" mode for Win8 found to be incompatible with many legacy programs (Epic/Weather Central).

MS begins rushing development of Win Blue. Will eliminate much of the graphic interface of Win 8. Will retain look but reduce touch interface. ('I want my command line' has become 'I want my mouse'.)

Developers have stopped writing for Windows so MS offers special incentive. As of 5/5/13, future of Win 8 uncertain - as with Kin and Zune, MS issues contradictory statements. Most believe MS will dump system within a year.

Announces Office will go online as Office 365 as a subscription service.

Netflix announces it will no longer support Windows product as Silverlight is too different from HTML 5 and the Windows market too small to justify the extra programming required to make it work every time MS has update.

You Tube access unavailable originally for Win8 as Google will not work with Silverlight any longer either. MS quickly issued a patch that allows access. Unfortunately, it also allowed elimination of ads and the ability to download videos. (What any rational person would consider an advantage.) As businesses pay for the ads and much/all of their material is copyrighted, MS receives a Cease and Desist order. (This may have been repaired already.)

iTunes not available for Win 8 unless running as a desk top.

MS announces that Skype will be a monthly subscription - Facetime (Apple) and Google Now+ are free (worldwide).

MS announces that Win 8.1 will boot to the old desktop and include a Start button.

According to Information Week (5/2/13) Surface tablets sell 900,000 units in the first quarter of 2013. In the same period Apple sold 19.5 million iPads, 8.8 million Android tablets were sold and QNX (Canadian OS based on Unix) sold 2.6 million tablets. Un-named source at MS indicated that the RT version would be discontinued.

Projections for 2013:

Apple - 99 million tablets

Android - 161 million (100 million in China alone)

MS - 14 million

QNX - 6 million

MS-OS is projected to have only 11% of the market by 2016.

Chromebooks are top selling computer in the world from November 2012 through February 2013.

HP introduces Chromebook.

Asian Consortium (China - South Korea - India) announce that they are producing a new operating system that will be 'connected' eliminating the ties to any particular machine or device.

MS begins Scroogle (Screw google) campaign suggesting that Chrome will not run all programs. (This is possibly the most dishonest ad campaign ever. It is commonplace in the tech industry that certain programs are 'unique' to a device by choice. For example: if you want to play Halo or Gears of War - 2 of the 3 most popular disc based games - you must have an Xbox. Windows itself will not run all Windows programs - the most embarrassing example was the list of compatible programs MS published when Vista was introduced. Scroogle has been described in tech journals as an act of desperation.) Under pressure from the board, Scroogle ends after three weeks.

4-19-13 Forbes:

"The Windows division, due to the lackluster launch of Windows 8, saw no growth at all. With Microsoft still resolutely refusing to provide official sales figures, the poor performance of the Windows division is the strongest sign yet that Windows 8 is failing. According to a new report, Microsoft is working to merge Windows and Windows Phone — PC and mobile — under a new product called Windows Blue. This contradicts what we've previously heard — that Windows Blue was just a service/feature pack for Windows 8 — but it does make a lot of sense, and it aligns closely with what we believe to be Microsoft's only chance of survival in the rapidly changing consumer computing market."

4-28-13 MS announces they are going to re-brand all of their products in an attempt to appeal to younger buyers. (Survey indicated that 18 to 35 year olds replace their tech devices every 18 months on average.)

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