The Future of Windows

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The bottom line question is "What do you need to do to get ready for the coming changes?" and the answer is nothing.

The kernel of the idea of this presentation was discussion by veteran Microsoft journalists and authors Paul Thurrott and Mary Jo Foley during the podcast Windows Weekly about the announcement of the Edge browser giving up the Microsoft rendering engine for the Chromium engine and the ramifications of that to PC computing. With the opening of Microsoft's browser to all Chrome extensions there will finally be a unification of extensions between the 3 major browsers: Chrome, Firefox, Microsoft's Edge (successor to Internet Explorer). More on that later.

A platform like Windows is only as good as programs that run on it and if no programs will run on it, it's useless. How programs work today is different than how they worked 30 years ago. Few computers are coming with CD drives and none have floppy drives. Many companies are moving away from the idea of installing a program on your computer and instead want you to use their program "in the cloud" from their websites (and charge you by the month for the privilege). This gives them the advantage of regular recurring revenue which makes their stock holders and Wall Street happy

How companies make their money is a good indication of what they may plan to do in the future.

To help in understanding my future predictions, let's start with the past and the history of how we got to where we are today.
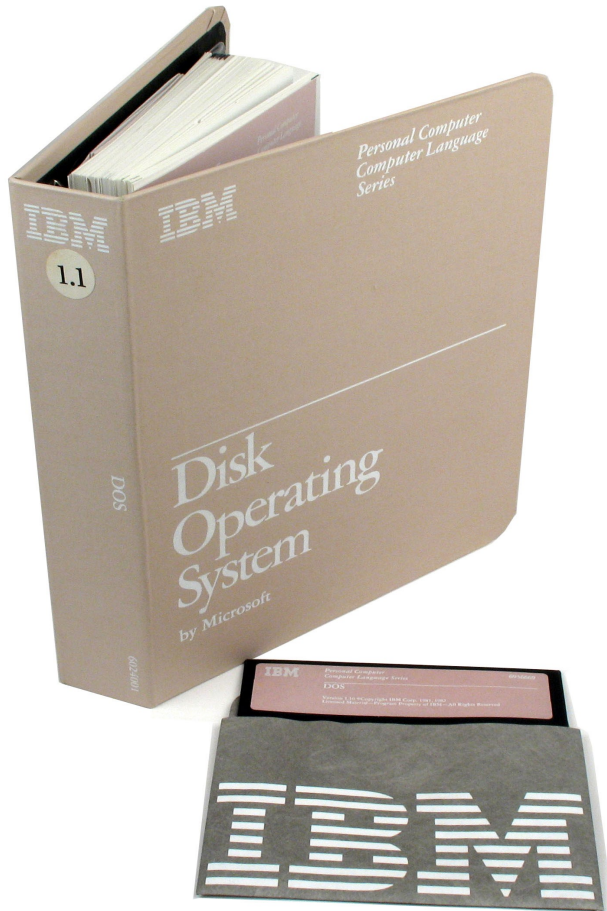
When IBM approached Bill Gates for an operating system for their new desktop computers, they licensed it rather than buying. IBM was in federal government antitrust lawsuit at the time and some think IBM thought the licensing move would work better for them in court. The result was that software could run on computers built by IBM and other company's machines as well. Many say THIS was what started the computer revolution.

It started with DOS

In the beginning was DOS -- Disk Operating System.

The Leading
Edge PC
Model D
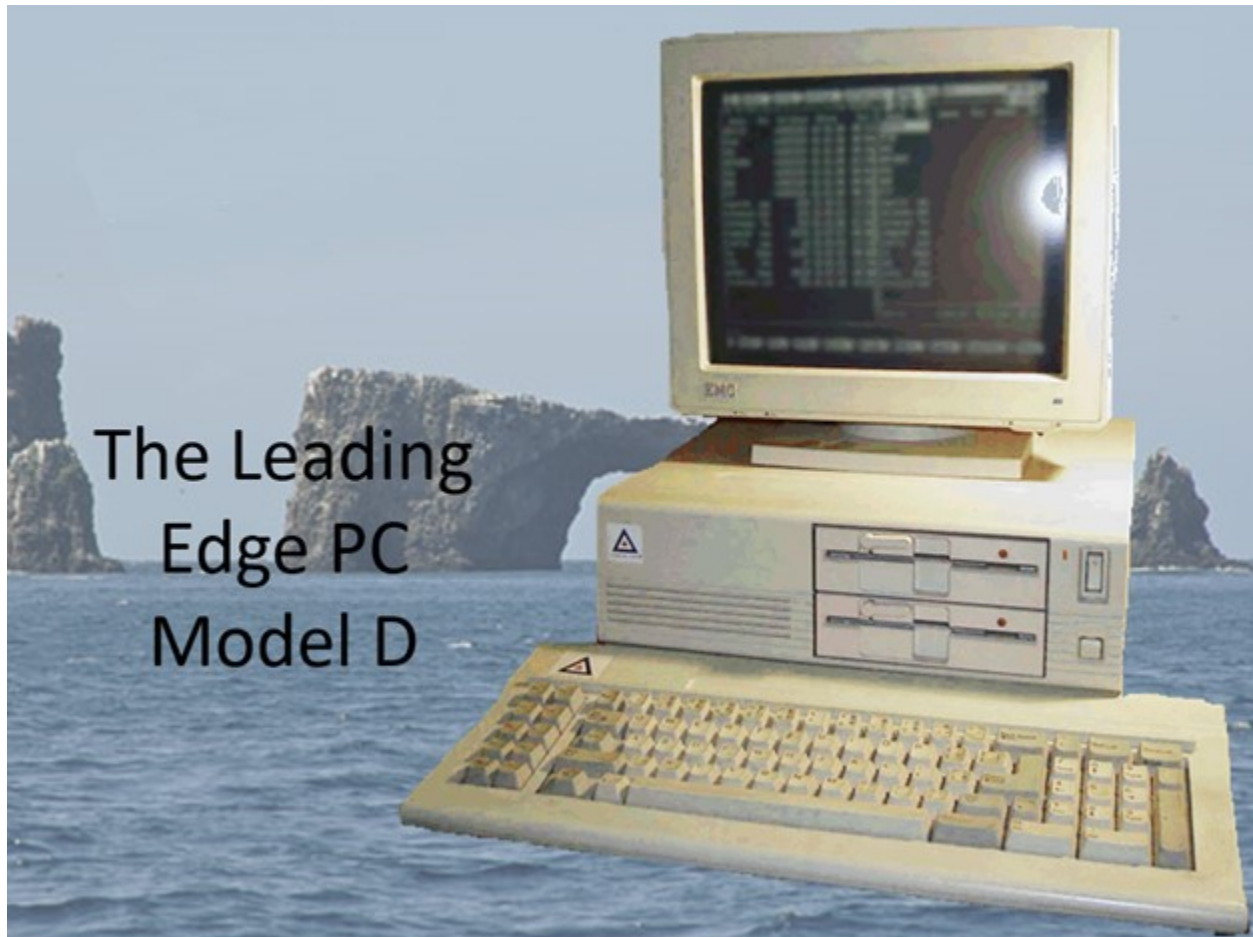
The Channel Islands PC Users Group newsletter is called "The Outer Edge" from this computer – the inspiration for the founding of the club – because it was owned by so many of the founding members who wanted a "support group" for learning how to use this powerful new contraption.

Many still love the command prompt and the power it wields, but for most, an easier way to computer (Windows) finally made it a "must have" at business and at home.

Windows 1.0 appeared in 1985 and was an optional GUI (Graphical User Interface), not a complete operating system, but rather an "operating environment" to extend DOS.

Windows 2.0 came in 1987 and offered a "Run time Version" and memory manager.

Windows 3.0, launched in 1990, thanks to virtual memory, allowed users to multitask.
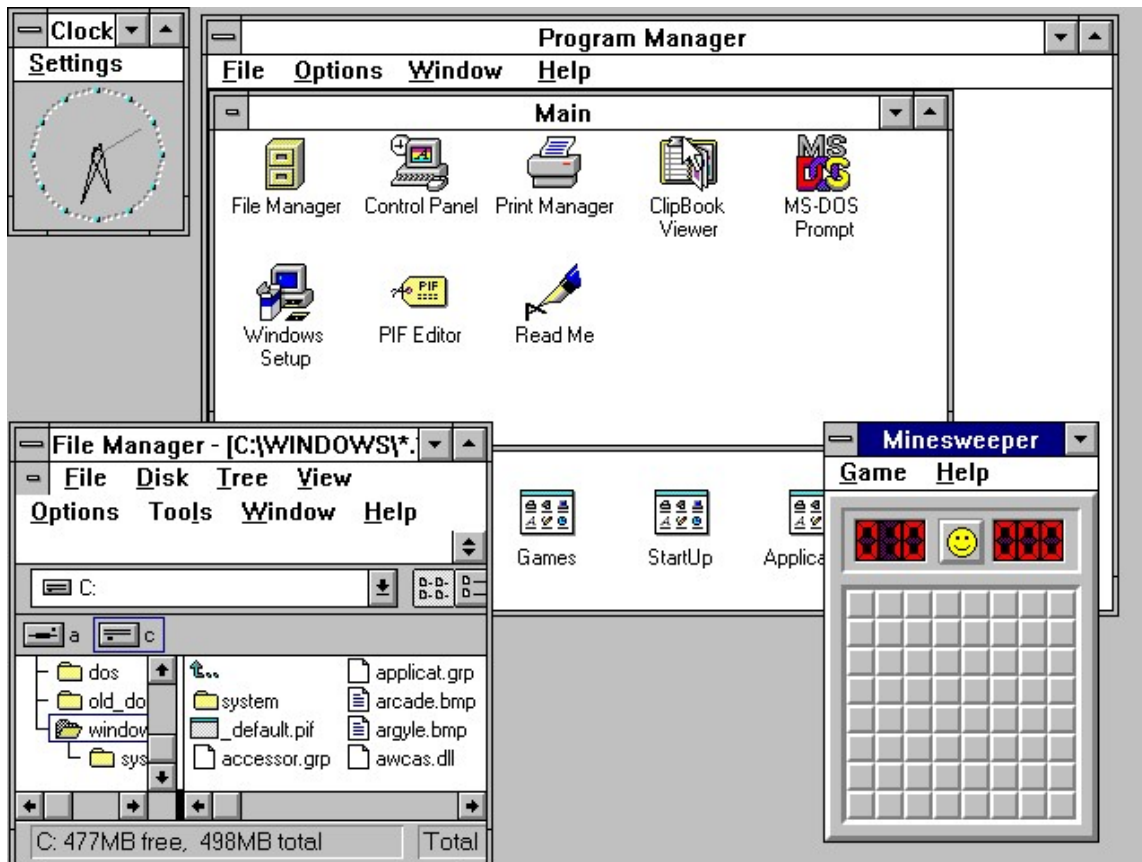
Windows 3.1, which came in 1992, offered scalable fonts, File Manager and Program Manager.

3.11 included 386 Enhanced Mode and an optional TCP/IP protocol stack for networking

Windows 95 supported Win32 applications.
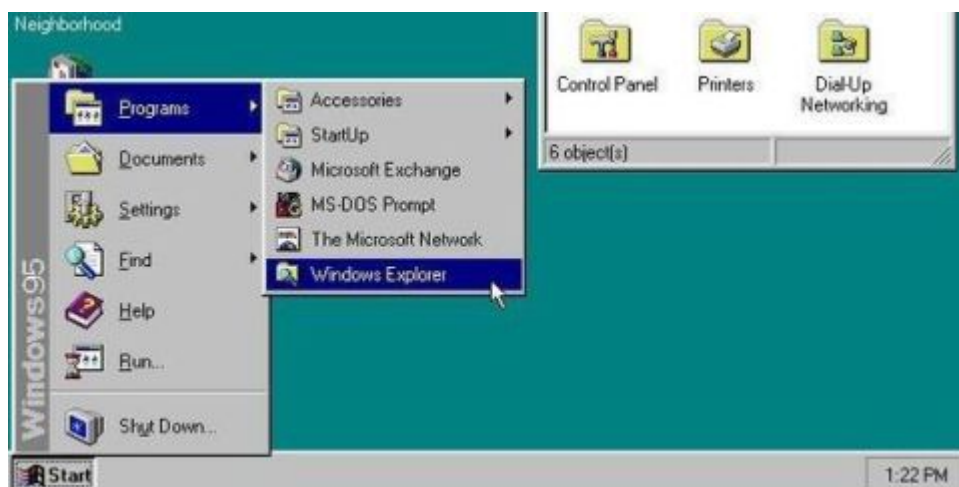
Notice the Start button?

In 1998, Windows 98 arrived. It featured a number of new technologies, including FAT32, AGP video, MMX, USB, DVD, and ACPI. Its most visible feature, though, is the Active Desktop, which integrates the Web browser (Internet Explorer) with the operating system. From the user's point of view, there is no difference between accessing a document residing locally on the user's hard disk or on a Web server halfway around the world.

Then came 98SE, the most beloved system of all up to that point. (Some still pine after Win 98SE)
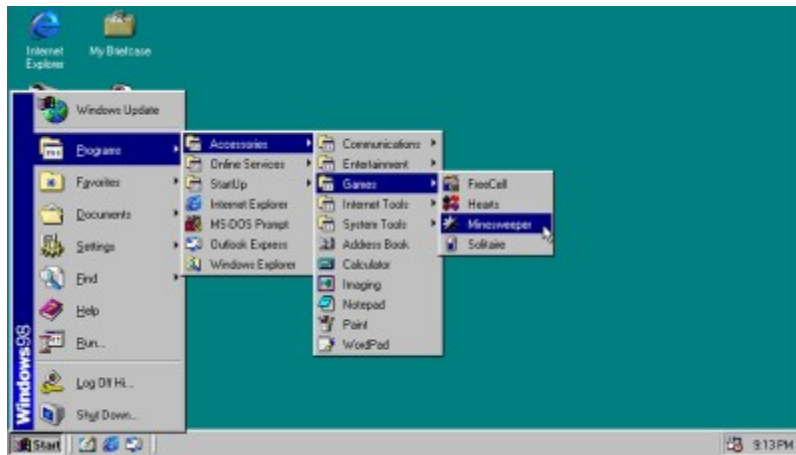
And, finally, Windows ME.

Not so loved, but brought many things we take for granted today including Universal Plug and Play, System Restore, Automatic Updates.

It included Internet Explorer 5.5, Windows Media Player 7, and the new Windows Movie Maker software, which provided basic video editing and was designed to be easy to use for home users.
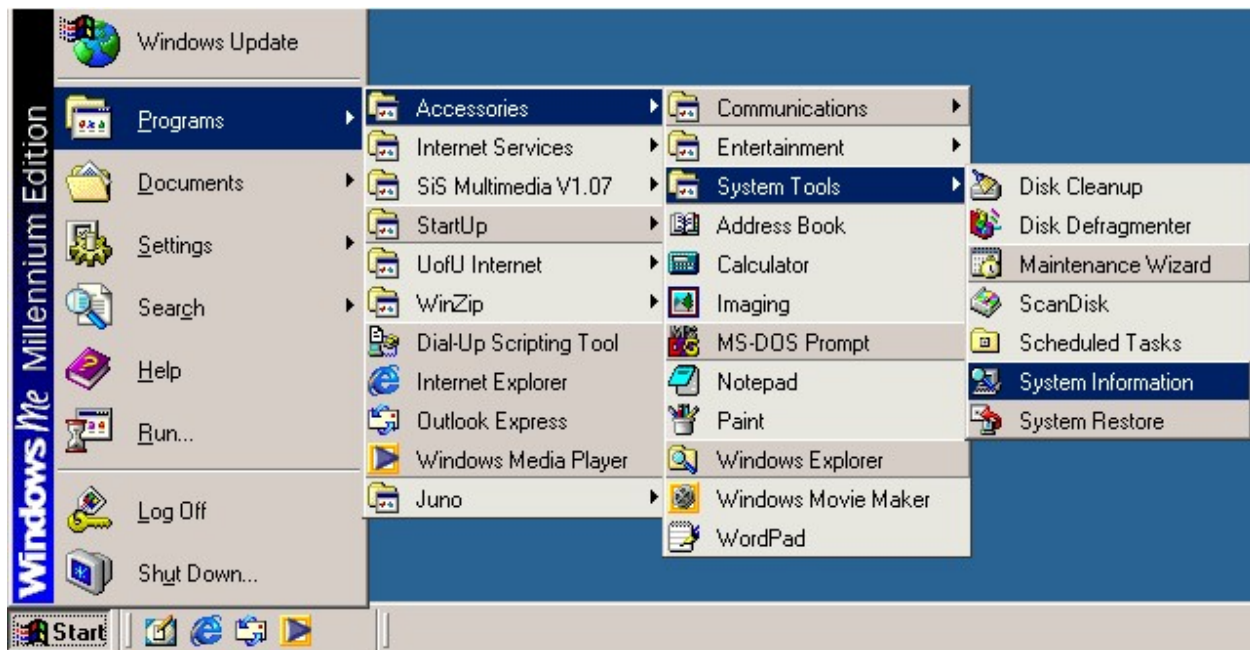

Bottom line of Windows so far: DOS-based Windows from 1985-2001

Microsoft developed additional versions aimed at businesses.

Windows NT base started in 1993 aimed at business and corporate users. Windows NT (New Technology) was a 32-bit operating system that supported preemptive multitasking. There were actually

two versions of Windows NT: Windows NT Server, designed to act as a server in networks, and Windows NT Workstation for stand-alone or client workstations.

Windows 2000 was the last version of the NT Windows family and is still the OS for many airline in-flight entertainment systems (and on US warships) because of its stability.
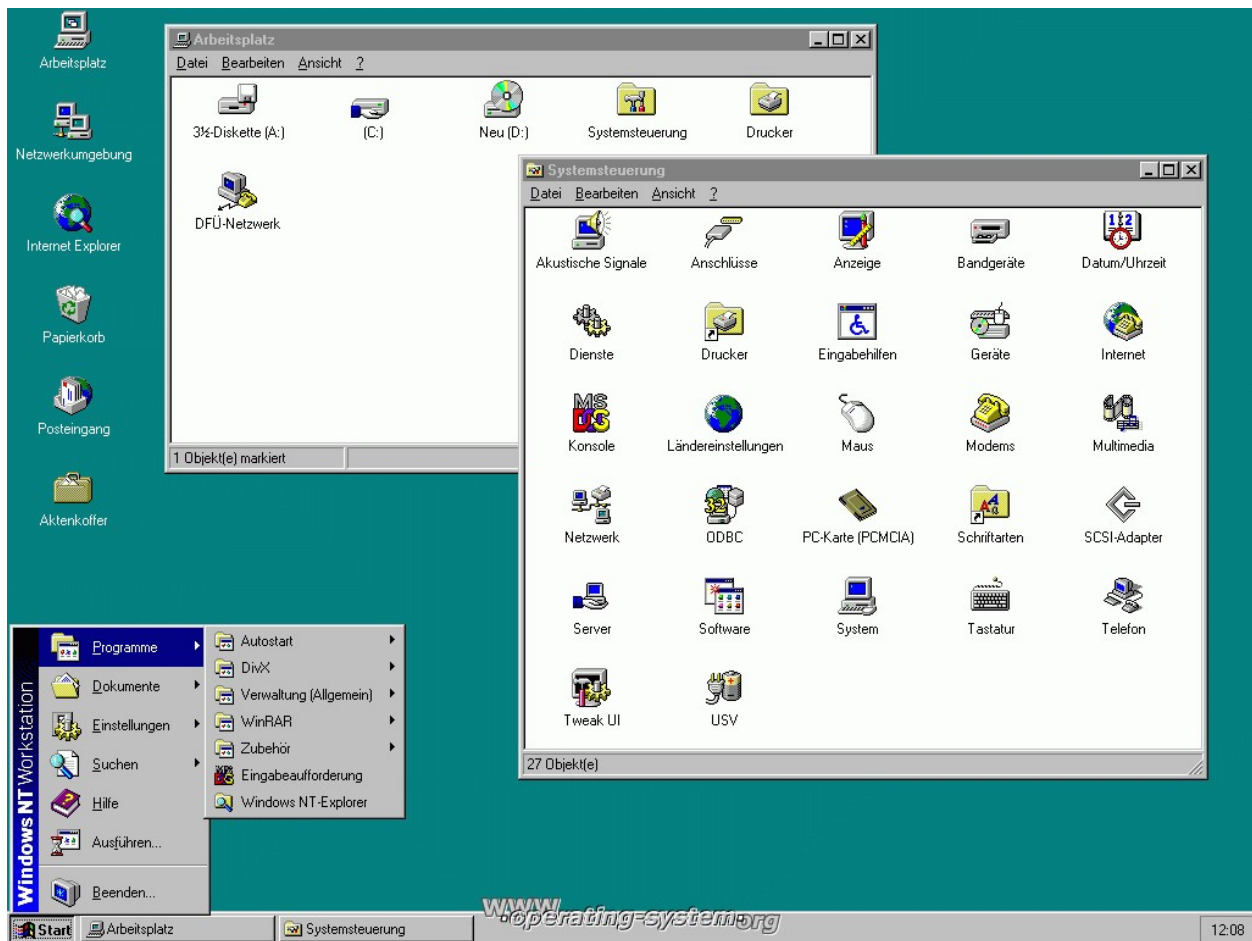
In 2001 Microsoft merged their 2 different lines with Windows XP. They called them Home and Professional, but the base code was the same.
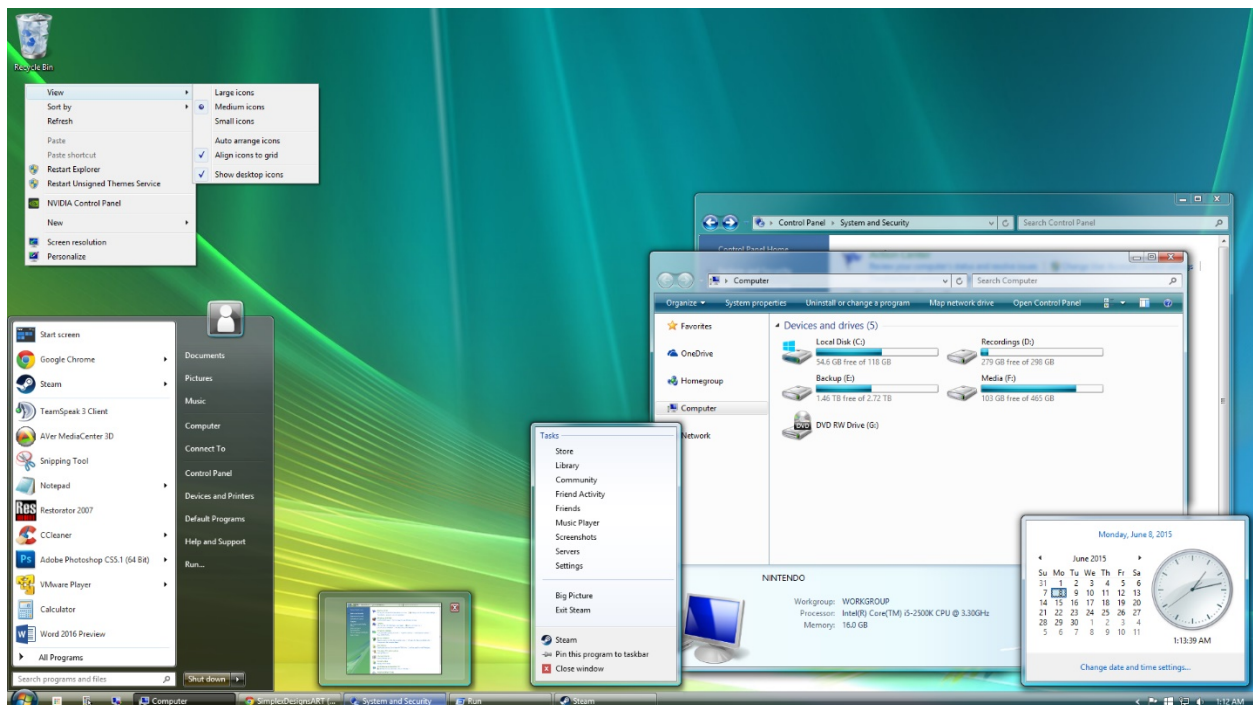
2001 Windows XP

Where the DOS-based Windows meets the NT-based Windows and then the different Windows Home and Professional code bases were only slightly different.
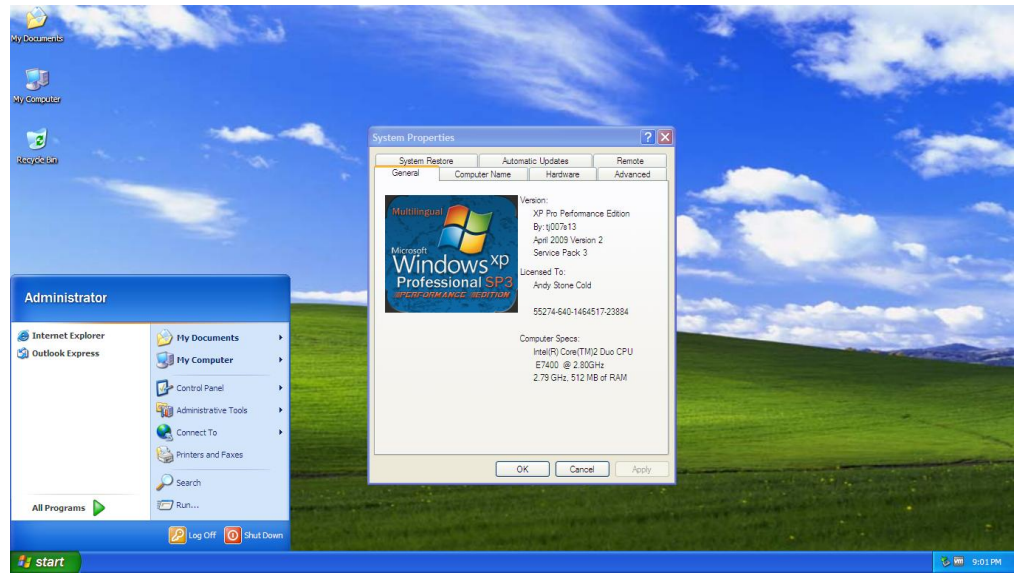
Microsoft tried to keep a schedule, which was promised to investors, of a new operating system and a new version of Office every three years. That schedule wasn't always met, and resulted in the release of some software before it was ready.

Problems with Longhorn

In May 2001 (before the release of XP), engineers were already working on the next version of Windows. Codenamed Longhorn it was to be released in 2004 as a minor step between XP and Blackcomb. Problems and delays resulted in the release date being pushed back several times in three years (including dropping WinFS) the company decided to skip Longhorn and merge features into what would become Windows Vista.

It was released in November 2006.

Microsoft said "Featuring advancement in reliability, security, ease of deployment, performance and manageability over Windows XP. New in this version was capabilities to detect hardware problems before they occur, security features to protect against the latest generation of threats, faster start-up time and low power consumption of the new sleep state. In many cases, Windows Vista is noticeably more responsive than Windows XP on identical hardware. Windows Vista simplifies and centralizes desktop configuration management, reducing the cost of keeping systems updated."

That was not my experience. Most people I know disliked it because of the annoying popups from User Account Control and the slowness in trying to run it on older hardware.

October 2009 brought Windows 7.
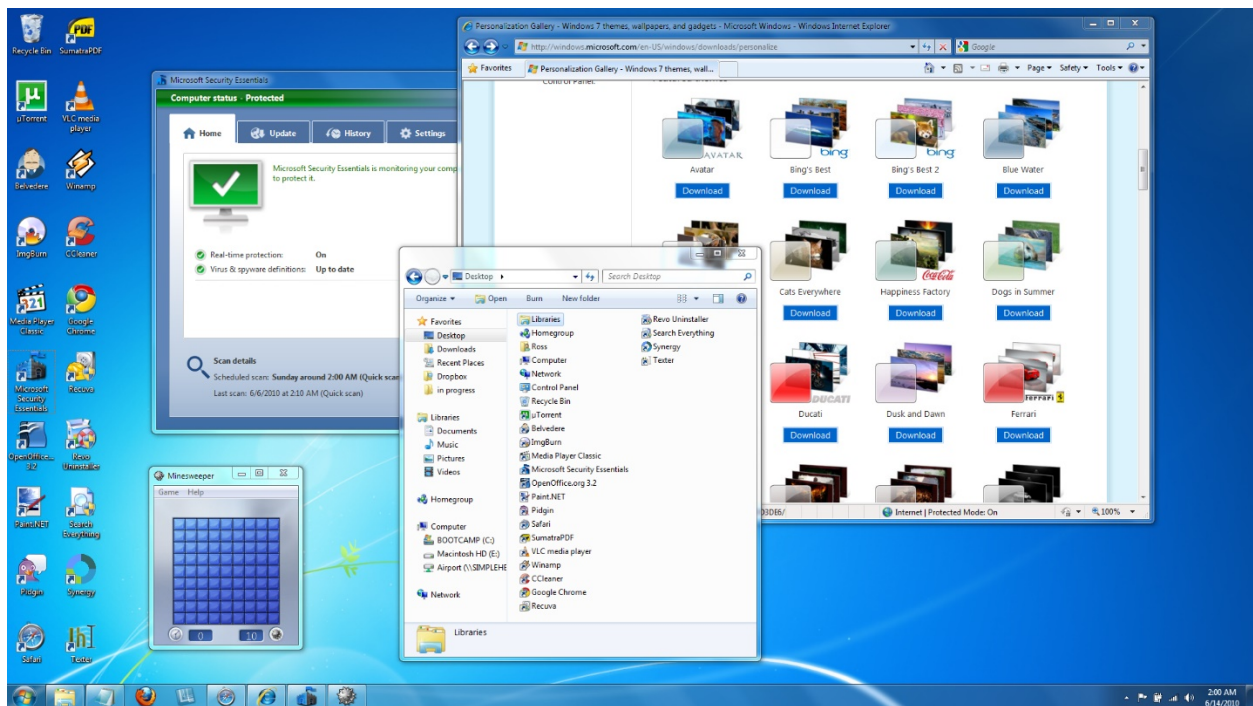
Microsoft said " Enhancements and new features in Windows 7 include multi-touch support, Internet Explorer 8, improved performance and start-up time, Aero Snap, Aero Shake, support for virtual hard disks, a new and improved Windows Media Center, and improved security."

Many just called Windows 7 a cleaned up Vista (or Vista Service pack 3)

Windows 8 came in 2012.

Here is where it gets interesting.

It was an attempt to make an operating system work the same on phones, tablets and PCs. Windows Store and "Metro Style Apps" were introduced to have a way to get programs on computers and tablets with no DVD drives. It also was a safety feature as all apps sold in the store would have to be Microsoft approved and (like Apple) Microsoft would get 30 percent of the sale of each app. Some people say this was a clear case of "Apple Envy". With Apple making so much money from the iPhone and iPad mostly due to not being able to install ANY software or apps on it without going through the Apple Store (and paying Apple 30% for each song, game, app) Microsoft had to think that this was something they were missing out on.

Unfortunately the public didn't see the advantages of Windows 8. Most were confused since it was SO different that the normal Windows experience they were used to at work and at home.
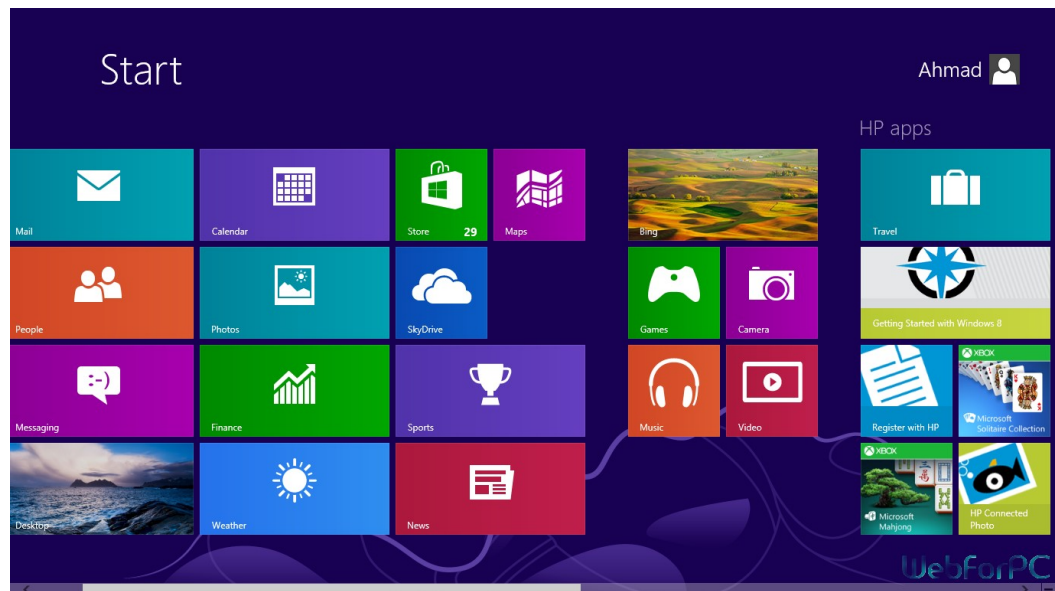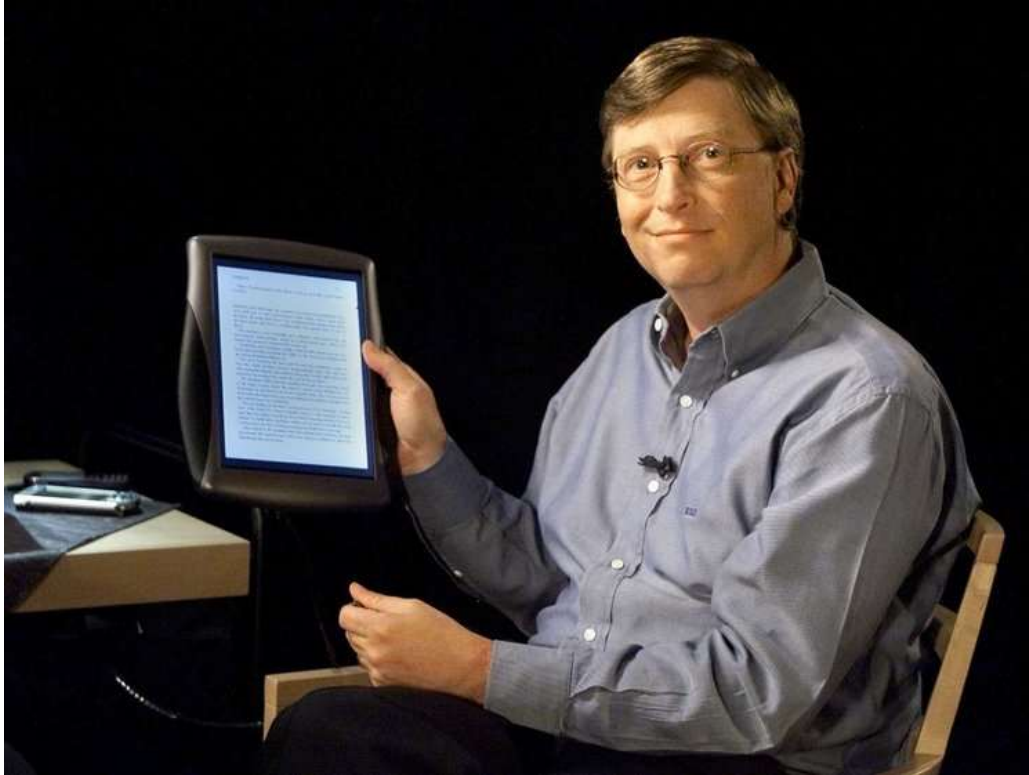

Slight side note:

Windows on other devices:

Microsoft tried to get Windows on other devices than just PCs.

Including the first tablet

(Windows CE 1996, Pocket PC 2000, Windows Mobile 2003, Windows Phone 2010, Windows 10 Mobile 2015-2017) Does anyone know anyone who ever had a Windows phone? Let's just say – not a money maker.

Windows 8.1 came in 2013 with changes to the Start button and desktop as default since Microsoft realized that people don't want to treat their PC like a tablet or phone.

Windows 10, the last version of Windows, came in 2015. It offered a free upgrade for current Windows users (7 or 8), and replaced Internet Explorer with the Edge browser. This marked the end of a new version of Windows every three years.
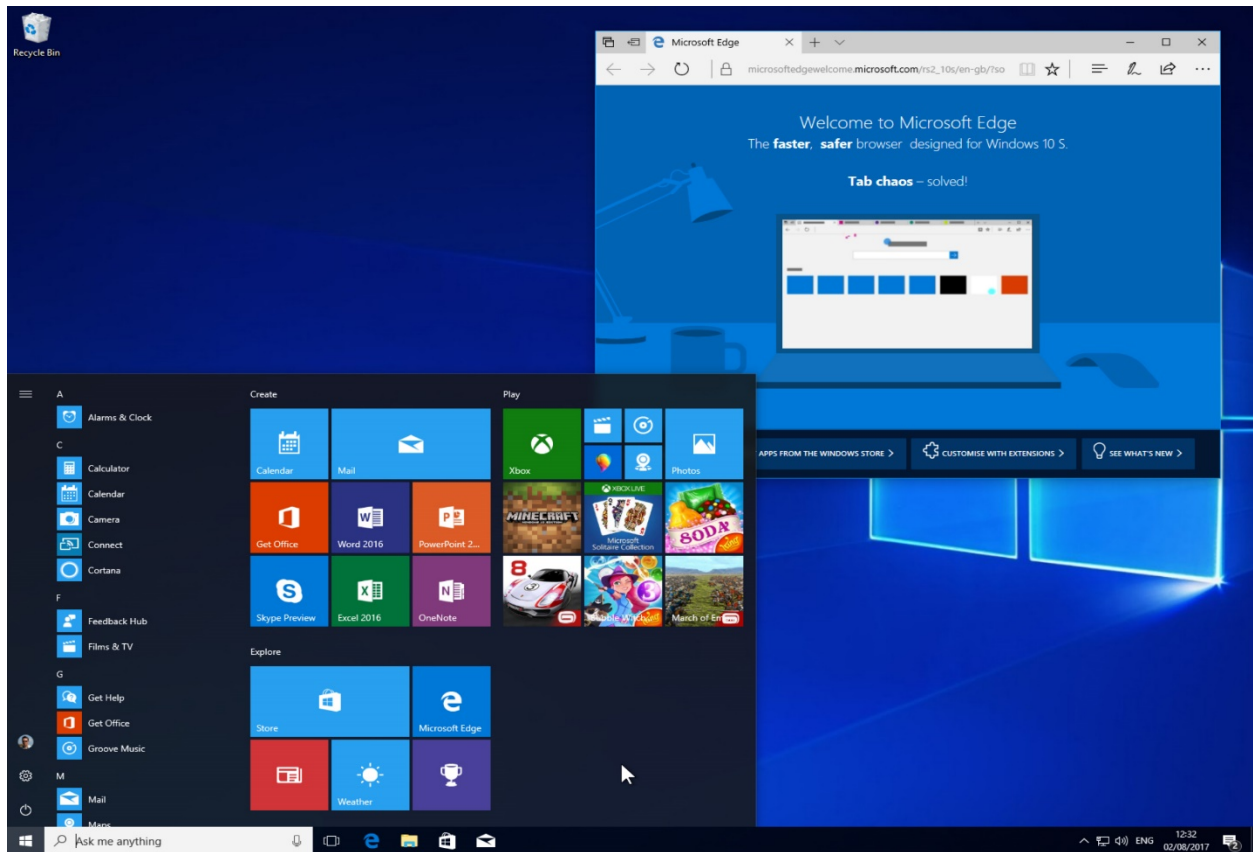
In 2017, the Windows 10 S mode arrived. It's just like Windows 10 BUT only runs UWP (Universal Windows Platform) apps from Microsoft Store. Like the original Windows 8 it really focuses on security and again – only allows programs (apps) from the Microsoft store that should protect users from malware, viruses, ransomware and other bad actors. But like Windows 8 – not received well since the main target for this version of Windows (business and corporate clients) always seemed to have their software that is proprietary to them and not in the Windows store.

In 2018, the Microsoft store changed its policy to allow developers to keep 95 percent instead of 70 percent (but not for games). So far, however, not many people are writing apps for only the Microsoft store.

But then there are Web Apps.

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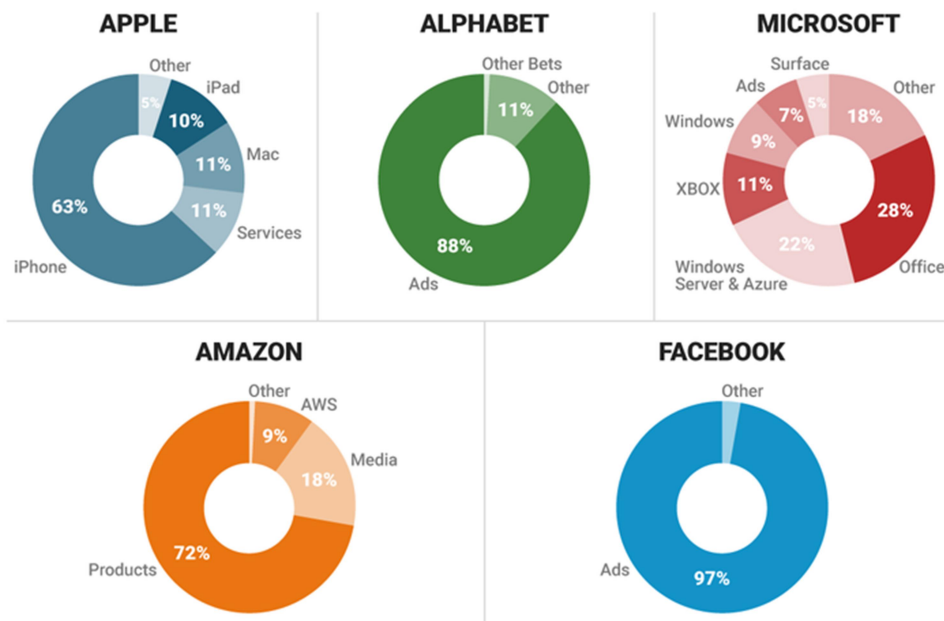
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Product	2016 Revenue
Microsoft Office system	$23,588
Server products and tools	$19,177
Xbox	$9,395
Windows PC operating system	$8,104

DATA SOURCE: MICROSOFT 2016 10-K. ALL NUMBERS IN $U.S. MILLIONS

TECH CHART OF THE DAY

REVENUE STREAMS OF THE BIG 5 TECH COMPANIES

APPLE
- iPhone 63%
- iPad 10%
- Mac 11%
- Services 11%
- Other 5%

ALPHABET
- Ads 88%
- Other 11%
- Other Bets

MICROSOFT
- Office 28%
- Windows Server & Azure 22%
- XBOX 11%
- Windows 9%
- Ads 7%
- Surface 5%
- Other 18%

AMAZON
- Products 72%
- Media 18%
- AWS 9%
- Other

FACEBOOK
- Ads 97%
- Other

SOURCE: Company annual reports. Figures FY2016

VISUAL CAPITALIST | BUSINESS INSIDER

Micosoft makes more money from Office than it does from Windows. Since Microsoft is no longer planning to make money selling new versions of Windows every 3 years to consumers, how will it make money?

In this chart notice the bump Microsoft gets every three years not when a new version of office comes out, but when support ENDS and those corporate customers have to purchase new copies for every desktop in their business.
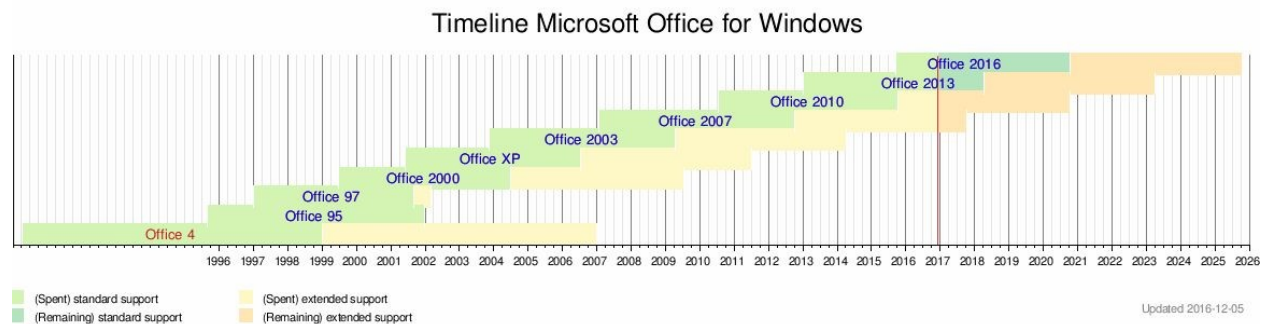
CEO of Microsoft Satya Nadella is not Bill Gates, and he is not Steve Balmer. Without the baggage of being a founder, or "ground floor" member of a company, he can be free to lead Microsoft into the future without having to maintain a vision that is 40 years old. In the last 5 years since his ascendance, he has been making strategic decisions daily

Stock price of Microsoft over the last 5 years (Satya Nadella's reign)

These charts tell part of the story, but Microsoft has also stated that the cloud services and apps are the future. This means monthly recurring income (Office 365) and even the future of other companies apps on the Azure platform or in virtual machines.

Here is where the Edge rendering engine moving to Chromium comes in. When you can run the programs you really want in a browser, who cares what Operating System you happen to be using? Windows 10, Apple OS, Linux, Chromebook – it is all the same to a browser.

Don't think you could ever get used to a world that doesn't have your programs loaded on **your** computer? Do any of you use Spotify? Audacity? Quickbooks online? Netflix? We are already getting used to the world where the O/S (operating system) doesn't matter as long as you can get to the internet.

Microsoft just couldn't get people to use the Edge browser. Some stats showed that main use of Edge was by people on new computers downloading the Chrome browser.

With Microsoft changing the rendering engine of Edge (with Chrome rendering engine) this could be the Edge browser could be coming to Windows 7, 8.1, the Mac and maybe Linux.

What good is the best browser in the world if no one uses it? Extensions attract many people to other browsers. Edge has dozens, while Chrome has thousands.

Updates to Edge now come twice a year (when the OS gets the major update). Now that it is being uncoupled from the OS it can be updated as often as Firefox or Chrome (every six weeks).

If all browsers have the same rendering engine, we'll no longer see statements on web sites that say, "This site best viewed in Internet Explorer."

Terms to look for in the future: PWA: Progressive Web Apps. "Windows Lite"

With container or VM to run old x86 apps

 "Polaris" "Windows Core OS"

For more than a year, we have been hearing about Windows Core OS and how it is a modern version of Windows. As Microsoft continues to build out the platform, it's time to take a look at what the secret project actually includes and how the company is positioning the platform.

In Microsoft's feverish attempts to shove out insider builds at an impressive rate, the company doesn't always do a great job at scrubbing the finer details from the builds. Because of this, and some help from a couple of insiders, I have been able to piece together what Lite is and where it's headed.

Microsoft is working on a new version of Windows that may not actually be Windows. It's currently called Lite, based on documentation found in the latest
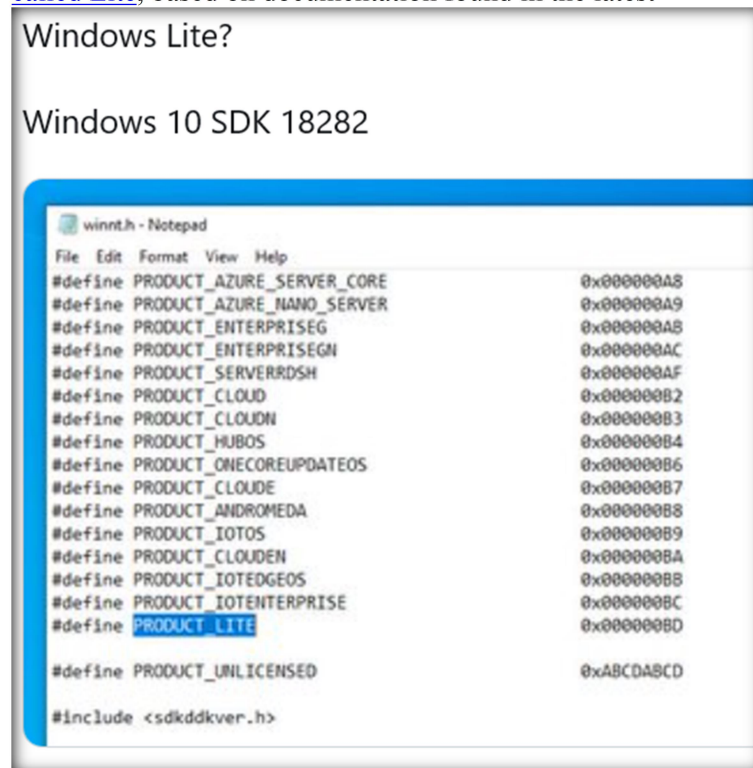
build, and I can confirm that this version of the OS is targeting Chromebooks. In fact, there are markings all over the latest release of the insider builds and SDK that help us understand where this OS is headed.
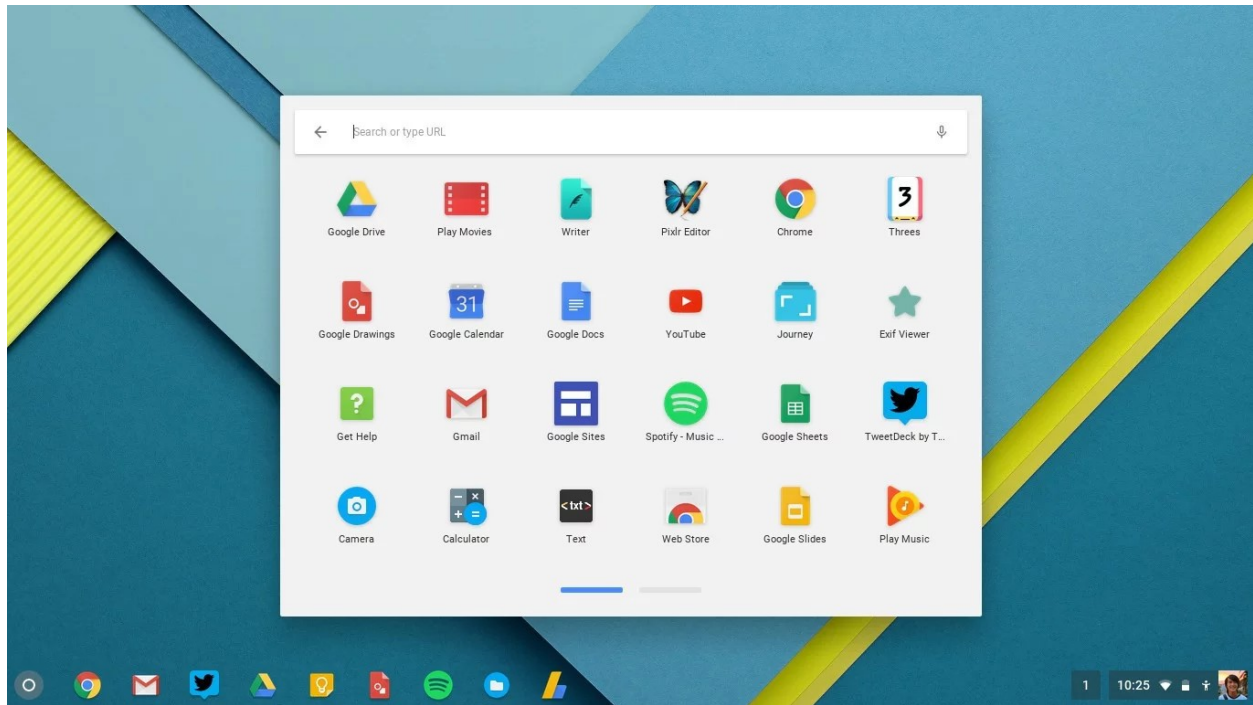
If you have heard this before, it should sound a lot like Windows 10 S and RT; Windows 10 Lite only runs PWAs and UWP apps and strips out everything else. This is finally a truly a lightweight version of Windows that isn't only in the name. This is not a version of the OS that will run in the enterprise or even small business environments, and I don't think you will be able to 'buy' the OS either; OEM (Original Equipment Manufacturer) only may be the way forward.

As a developer, you don't develop for an OS anymore, but a browser

Moving to Chrome, it will work

Rumors of Windows Core OS is that it will run Win32 apps either in a container VM or remotely from a server somewhere, WAs, any business apps that are win32 run in a container. You have to give people a way to move forward while retaining what's important to them (which is why Windows 10 S failed)

Developer previews for 2019 have resulted in some information leaking out as developers work to build apps and programs that will work with any changes.

On the net:

https://www.zdnet.com/article/microsofts-edge-to-morph-into-a-chromium-based-cross-platform-browser/

https://www.zdnet.com/article/what-makes-microsoft-tick/

https://www.zdnet.com/article/ms-linux-lindows-could-microsoft-release-a-desktop-linux/

https://www.zdnet.com/article/microsoft-is-readying-a-consumer-microsoft-365-subscription-bundle/

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