



# Windows 11 Release October 5, 2021

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September 20, 2021

HHICC PC



# What We'll Cover

- What has changed since the Microsoft Promise?  
“Windows 10 is the last Windows”
- What will come in Windows 11
- When Should I upgrade
- Some guidelines for buying now

What has  
changed  
since the  
promise?

## Technology

- Chips
  - CPU – number of transistors, threads (# of processors)
  - Memory – “System on a Chip”  
Memory Cache in CPU
  - Storage – SSD

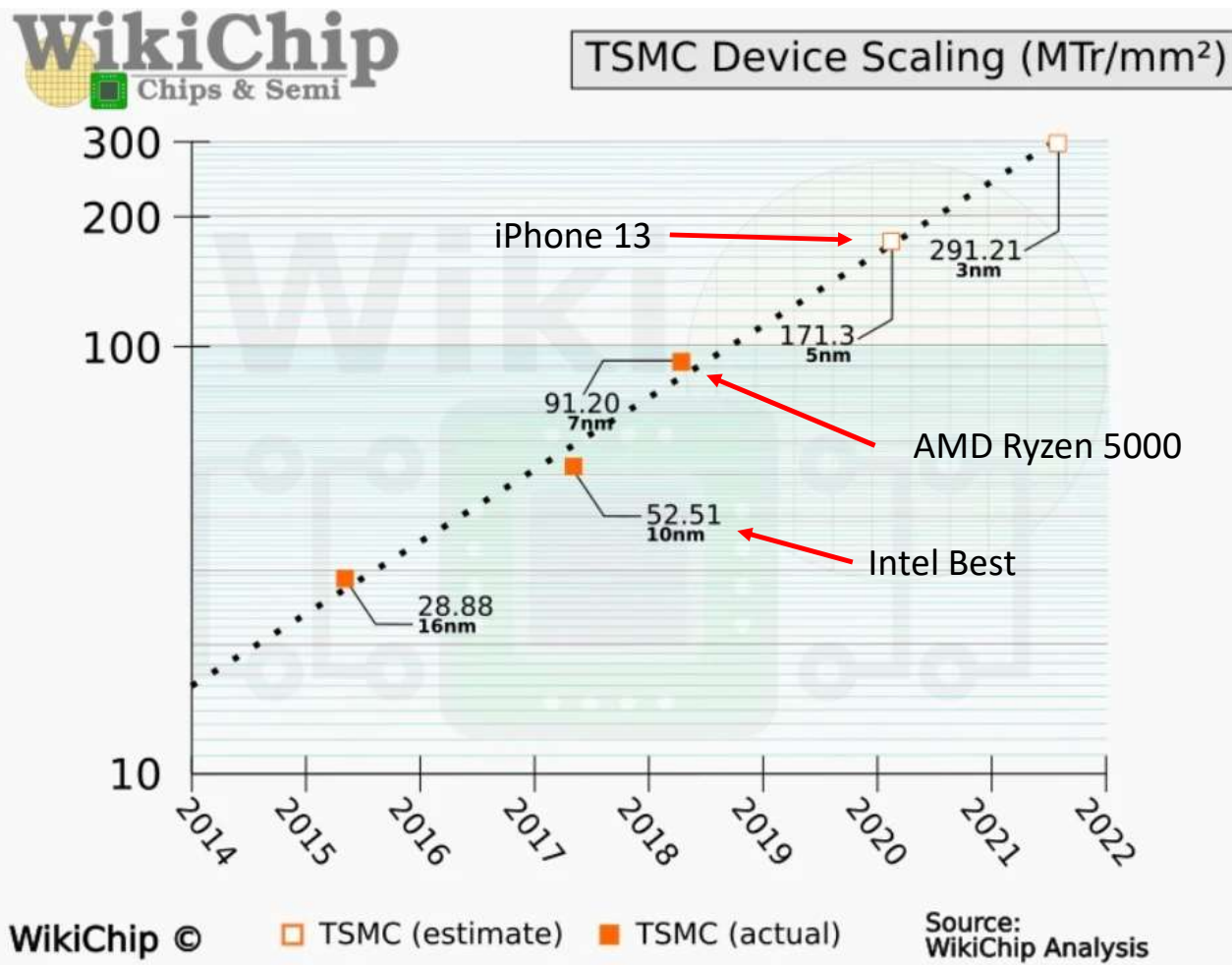
## Security

- Sophisticated Malware Attacks
- Ransomware

# PC components all use millions of Transistors

- Transistors are fabricated by incredibly complex processes
- A “Fab” or Fabrication Plant is very expensive to build
- Moore’s Law has held since 1970
  - The number of transistors in an Integrated Circuit doubles every two years because of the advancement in manufacturing technology. We also call this Die Shrink.
- Smaller Die Size
  - Allows more transistors per area
  - Allows faster switching time
  - Consumes less power

# Transistor Density



# Why Is This Important?

- Intel is WAY behind in chip density
    - Intel chips are at a competitive disadvantage to chips fabricated by TSMC
    - TSMC's customers
      - Apple - ARM chips
      - All the crypto mining customers – specialized ARM
      - AMD - Ryzen chips
      - Qualcomm - Snapdragon chips
    - Very Expensive to implement and expand chip building capacity
- Chips are getting much better, faster, use less power
- Chips are getting more expensive!
- **Windows 11 Processors** will be faster and use less power
  - Windows 11 is geared to support all three chip companies (AMD, Qualcomm, Intel) which makes backward compatibility too difficult.

# Security and TPM - 2

- Trusted Platform Module – version 2
  - Specified by the the Trusted Computing Group : Members include Intel, AMD, IBM, Microsoft, and Cisco.
  - TPM originally a module that was soldered to the mother board
  - New CPU's include TPM
  - TPM – 2 Supports advanced security functions
    - Advanced encryption (device and communications)
    - Device Identification
    - Device to Device communications
- The only processors that will be supported by Windows 11 are those that include TPM-2
  - “Windows 11 raises the bar for security by requiring hardware that can enable protections like Windows Hello, Device Encryption, virtualization-based security (VBS), hypervisor-protected code integrity (HVCI) and Secure Boot. The combination of these features has been shown to [reduce malware by 60%](#) on tested devices. To meet the principle, all Windows 11 supported CPUs have an embedded TPM, support secure boot, and support VBS and specific [VBS capabilities](#).”

# Windows 11 Code Will be Optimized For

- Qualcomm and AMD processors, as well as Intel processors
- TPM-2 Security

These two factors determine the “eligible hardware” for Windows 11

This does not allow “backward compatibility”



# What Features will come in Windows 11?

- The basics of Windows will not change!
- Useability Improvements
- Brand New Possibilities

# The Basics Are Unchanged

If you know how to do it on Windows 10, You'll easily figure it out on Windows 11

- Program Windows
- Mouse protocols
- Desktop
- Taskbar
- Settings
- Start Button
- Etc.....

# Useability Improvements



*“The new design and sounds are modern, fresh, clean and beautiful, bringing you a sense of calm and ease.”* Windows Experience Blog



Start Button “most frequent” items



Snap Layouts



Screen and Desktop  
management

Multi screen  
management  
Multi desktop  
management

# Brand New Features

Widgets – quick access to current events

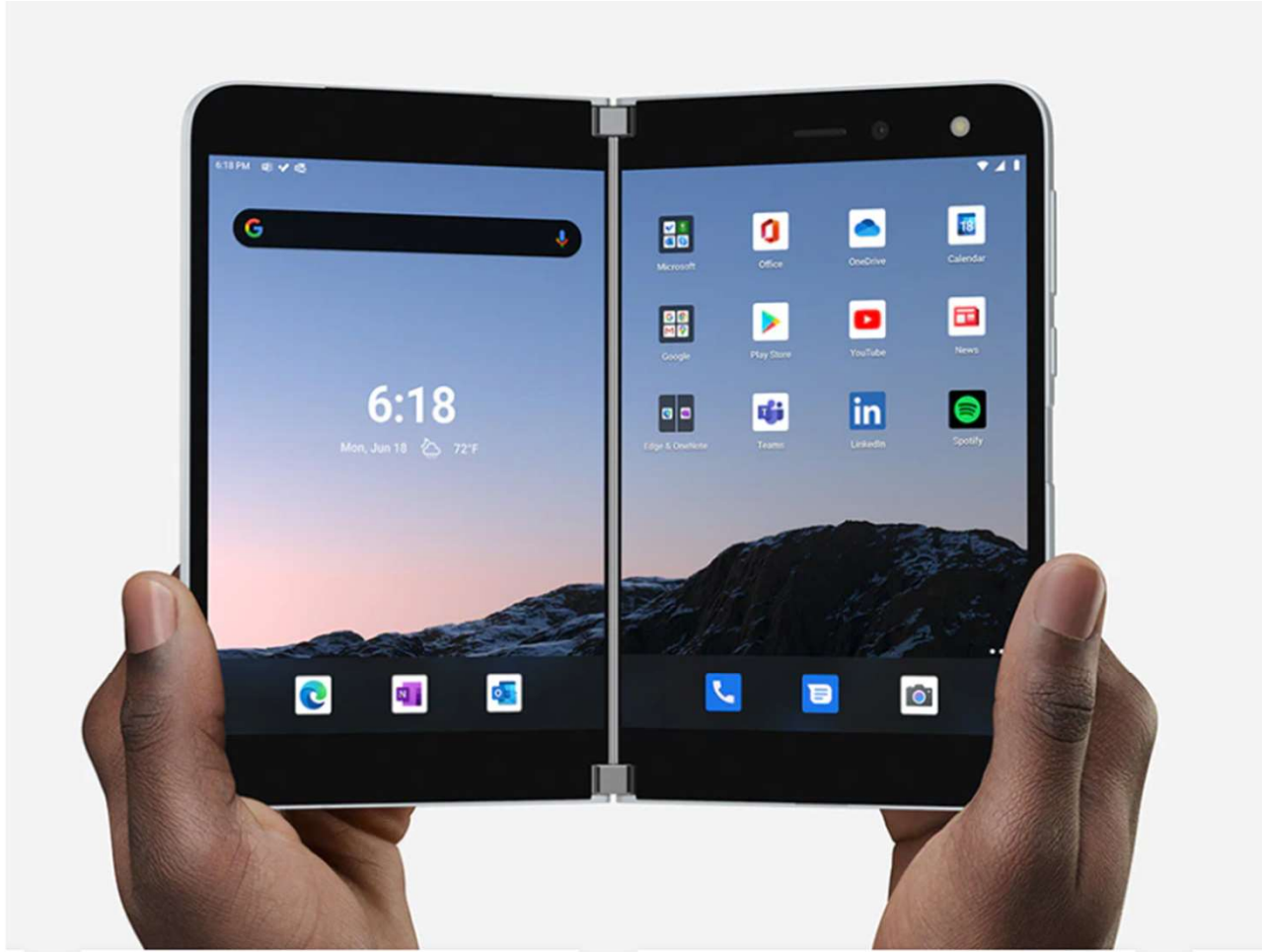
Microsoft Store

- Third party desktop apps – safe access
- Android apps – Amazon app store

Gaming Eco system

Future device changes based on new chip possibilities

- Cellular modems
- Advanced AI
- Advanced Graphics



# Windows 11 Roll Out Plan

“The free upgrade to Windows 11 starts on October 5 and will be phased and measured with a focus on quality. Following the tremendous learnings from Windows 10, we want to make sure we’re providing you with the best possible experience. That means new eligible devices will be offered the upgrade first. The upgrade will then roll out over time to in-market devices based on intelligence models that consider hardware eligibility, reliability metrics, age of device and other factors that impact the upgrade experience. **We expect all eligible devices to be offered the free upgrade to Windows 11 by mid-2022.**”

# When Should I upgrade?

Unless you want to be an “early adopter”, or need one of the new features, wait!

If you won't need a new PC for a couple of years, wait!

- Windows 10 will be fully supported through 2025 and probably longer.
- Office will run on Windows 10 and Windows 11.
- Windows 10 updates will slow down to just security, which can be a very good thing!

The longer Windows 11 is available, the more device features will be released – so two or three years from now, there will be some amazing Windows 11 devices

- The ARM advantage – integrating phones and laptops/tablets (5G and WIFI 6)
- The chip SoC advantage – smaller, lighter devices using much less power

# Buy a new PC to Upgrade?

Currently in stock Windows 10 PC's will probably have price reductions, or at least no price increases

vs.

New devices with Windows 11 preinstalled will be priced to account for the more expensive chips

AMD Ryzen 5 and 7 series 5000 processors seem to have some good prices!



# PC Spec Guidelines for buying now

**With AMD Processors – be sure to go with series 5000 (ie. 5000U)**

**Light User: email plus web plus some documents**

*Processor = Intel I3 or Ryzen 3 or 5, Memory = 8 GB, ~~Hard Drive 500 GB~~  
SSD = 128 GB*

**Economy User: email plus web plus watching videos plus home office work plus video conference (Zoom)**

*Processor = Intel I5 or Ryzen 5 or 7, Memory = 8 or 12 GB, SSD 256 GB*

**Heavy User: multiple email accounts, heavy office work, photo or video processing**

*Processor = Intel I7 I9 or Ryzen 7 or 9, Memory = 16 GB, SSD 500 GB*

*From Bestbuy's website*

**Dell**

Dell - Inspiron 7000 2-in-1 14.0" Touch-Screen Laptop - AMD Ryzen 7 - 16GB Memory - 512GB Solid State Drive - Blue

**Model:** i7415-A143BLU-PUS **SKU:** 6458906

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Questions?

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