

# THE WI-FI SUCCESS STORY

Launched 20 years ago, **Wi-Fi has evolved from an experiment to a necessity** that contributes billions of dollars to the U.S. economy.



**1985**

## JUNK BANDS

The FCC makes an unprecedented move, opening up three spectrum bands for unlicensed use — anyone who follows the rules can use them. This spectrum was previously used for government radar.

FCC, 2002



**1990**

## WIRELESS PAYMENTS INTRODUCED

WaveLAN, an early version of Wi-Fi, is installed in cash registers — a critical first step for digital payments and the wireless economy.

EE Times, 2015

**1994**

## WI-FI GOES TO COLLEGE

Carnegie Mellon University begins installing the first campus-wide Wi-Fi network.

Carnegie Mellon University, 2011



**1999**

## LOOK MA, NO WIRES!

Steve Jobs unveils Apple's iBook, the first commercial laptop able to surf the web wirelessly.

Cult of Mac, 2016

**2007**

## BUSINESS ESSENTIAL

Laptops replace desktops as the go-to work computer, making Wi-Fi a critical business technology.

IHS Markit, 2008



**2010**

## TABLETS

Wi-Fi-only tablets introduced, setting off a global mobile computing revolution in homes, offices and businesses.

Fast Company, 2010



**2017**

## NEW REALITIES

The first self-contained Virtual Reality headset launches, powered entirely by Wi-Fi.

Oculus, 2019

**2022**

## 5G SPEEDS FOR BILLIONS WITH WI-FI

Wi-Fi 6 global annual chipset shipments will exceed 1 billion.

ABI Research, 2018

## EVEN MORE WI-FI

57% of Internet traffic will run over Wi-Fi.

Cisco, 2018

**1985**

## FROM TRASH TO LITTLE TREASURES

This spectrum is almost immediately put to use for home appliances like microwaves, garage door openers and baby monitors.

FCC OET Working Paper, 2003



**1988-1989**

## WIRELESS ROUTERS ARRIVE

The first wireless routers, the Proxim 900 MHz RangeLAN and ARLAN-SST, were specialty devices to connect computers in warehouses and track retail inventories.

IEEE, 2008

**1991**

## CUTTING THE CORD

VTech releases the first 900 MHz cordless phone using the former junk spectrum.

Chicago Tribune, 1993



**1997**

## A NEW STANDARD

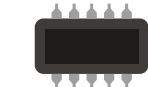
The first set of standards for Wi-Fi—the IEEE 802.11 protocol—is released. It carries data at 2 MB/s.

The Verge, 2019

**2005**

MILLIONS SOLD  
More than 120 million Wi-Fi chipsets shipped.

Wi-Fi Alliance, 2005



**2008**

## SMARTPHONES

Apple's iPhone 3G launches with Wi-Fi, kicking off the smartphone era and a boom in Wi-Fi devices and traffic.

Apple, 2008

**2015**

## BILLIONS SOLD

10 billion Wi-Fi devices have been sold. From cell phones to tablets to sensors at railyards and wireless airport gate operations to medical telemetry units and point of sale devices in retail stores, Wi-Fi powers our daily lives.

Wi-Fi Alliance, Jan 2015

**2018**

## WI-FI SUPERCHARGES THE ECONOMY

Wi-Fi generated more than \$500 billion in economic value in the United States.

WifiForward, 2018



**2023**

## SPOILER: THIS WILL BE BIG

Wi-Fi is expected to generate nearly \$1 trillion for the U.S. economy in 2023.

Wi-Fi Alliance, 2018

## WI-FI HOTSPOTS

**1998**

MobileStar deploys the first Wi-Fi hotspots in airports and hotels across the U.S.  
Hospitality Net, 1998

**2017**

Total number of public Wi-Fi hotspots in the U.S. reaches 25.7 million.

**2022**

Wi-Fi Alliance, 2018

Total public Wi-Fi hotspots in the U.S. will grow to 77.0 million.  
Cisco, 2019

## WI-FI OFFLOADING

With 5G on the horizon, even more data will be offloaded from cellular to Wi-Fi than over previous network generations (2G, 3G and 4G). 5G devices and services will need significant Wi-Fi capacity to support faster speeds, lower latency and many, many connections.  
Cisco, 2019

## WI-FI STANDARDS: INNOVATION CONTINUES

Wi-Fi 4 (802.11n) – In 2009, this version topped 600 Mbps and nearly doubled the broadcast range of its predecessors.

Wi-Fi 5 (802.11ac) – In 2013, this evolution was designed to meet the need to move large amounts of data, such as cloud storage services and streaming high-resolution video.

Wi-Fi 6 (802.11ax) – In 2019, companies began shipping Wi-Fi 6 products created to improve download speeds by 4Xs and upload speeds by 6Xs, as well as provide better coverage and battery life than the current standard.  
The Verge, 2019