Exploring the smartphone

This timeline will help you to learn about some of the key developments in the era of the digital computer, and the code that runs on them.

1993

Photograph by Rama, Wikimedia Commons, CC-BY-SA 2.0 FR

Apple launched its Newton Messagepad: a type of device known as a Personal Digital Assistant, or PDA. It had a black and white touchscreen and was the first PDA to feature handwriting recognition. Users wrote on the screen with a stylus, and their writing was transformed into text.

It launched at a price of $900. It was battery powered, and as well as the built in apps like a notepad, calendar and address book, could run applications made by other developers, or apps.

1994

The IBM Simon was launched; the first PDA to also work as a telephone. It could use its phone's data connection to send emails and receive faxes. This was the first portable device that resembled a smartphone, through its combination of portable, touchscreen computer and data connectivity.

1996

Palm Computing launched the Palm Pilot 1000, the first in a long line of PDAs. The Palm Pilots were much smaller than the Newton, and notably cheaper.

They used a simplified form of handwriting input, which was often seen to be more reliable than the true handwriting recognition of the Newton.

2000

Sony Ericsson launched the R380. This was a similar device to early combined PDAs and phones - but is notable for being the first device to use the name smartphone to describe itself.

The R380 set a template for similar 'smartphones' in the early 2000s.

2002

In the US, mobile operator T-Mobile released the Sidekick (a rebranding of the "Hiptop" device designed by Danger).

The Sidekick provided access not just to email, but also instant messaging and the web. With its unlimited data tariff, it helped popularise the idea of mobile internet access. It made the case that the connected device wasn't just a PDA for businessmen, but a communication tool for anyone. It became wildly popular with young people.

2007

Image by Bz via Wikimedia Commons CC BY-SA 4.0

Apple launched the first iPhone. It was the first smartphone with a capacitive touchscreen, which means it allowed the detection of multiple fingers at once, and detection of touch without pressure.

The iPhone set the template for smartphones that followed it. The first iPhone, though revolutionary in many ways, was missing many features we take for granted - such as GPS, or the ability to install 'apps' from other developers.

2008

iPhone 3G (left) by Jurvetson, Wikimedia Commons, CC BY-SA 3.0
and HTC G1 (right) by Angela N., Wikimedia Commons, CC BY SA 3.0

Apple launched the iPhone 3G. As well as adding faster 3G networking, this included GPS (global positioning system) support, allowing the phone to precisely locate itself on a map.

The iPhone 3G also added support for the newly launched App Store, and Apple allowed anyone to develop software for their phones.

Google also launched their own mobile operating system: Android. They launched it alongside the G1, a touchscreen smartphone made by HTC. The G1, like the iPhone, featured a capacitive touchscreen - but also a physical keyboard, hidden underneath.

2009

Palm launched their Pre mobile phone. Notably, it offered the option of a replacement back for the device that supported charging the battery wirelessly, by just resting the phone on a charger.

2010

Apple launched their iPad tablet: a large, touchscreen, slate-like computer. The iPad, in many ways, was effectively a large iPhone: a touchscreen device with a battery.

The main difference was the size of the battery and the size of the screen. The growth of the technology to make smartphones - powerful, but tiny chips, alongside new battery technology - enabled advances in other areas of computing, and new device categories.

2013

Photograph by Wolfgang Elsässer (Geryoned), Wikimedia Commons, CC BY-SA 4.0

Fairphone launched their first device, the Fairphone 1. Fairphone are focused on making smartphones more fairly. That meant everything from ensuring better conditions for the workers making the phones, to making sure that users can get support and repairs for the device for its lifetime.

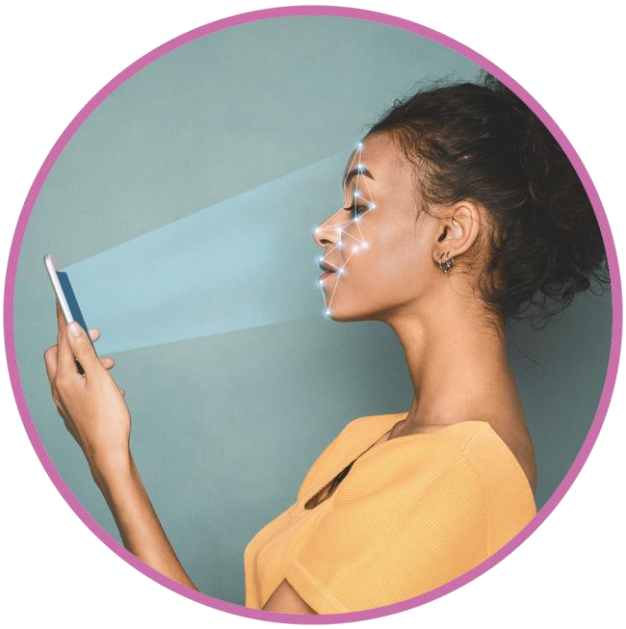
The devices also make every attempt to avoid using minerals sourced from conflict zones (where the sales of such materials can lead to prolonging warfare and unrest).

2016

Image by Bill Hartman, Wikimedia Commons, CC BY 2.0

Blackberry stopped making their own phones and hardware. A giant of pre-iPhone mobile communications, their devices popularised mobile email and messaging in the early 2000s. However, supporting their more conservative purchasers meant they failed to keep pace with the post-iPhone, touchscreen led smartphone revolution.

2017



Apple launched ‘Face ID’, which detects the 3D shape of a face in front of a phone and uses this to verify a user's identity. Working similarly to a Microsoft Kinect, this involved adding new infrared projectors and sensors to the front of the phone.

2019

Google added short-range radar - branded as Motion Sense - to the front of their Pixel 4 phone. This detects not only the presence of a hand near the screen, but also gestures made in the air above it. The sensor array in the front of a phone continues to grow.

As of 2019, the World Advertising Research Center (WARC) estimate that 2bn people use a smartphone as their only access to the Internet.