

History of smartphones

What is a smartphone? What is the difference between a mobile phone and a smartphone? A smartphone has the capabilities of a mobile phone, but not the other way around. We can think of the smartphone as an improved version of the mobile phone. Nowadays many people even prefer to use their smartphones for their daily tasks rather than their computer. Key features distinguishing a smartphone from a mobile phone may be: a touch screen, a digital and video camera, a media player and other features related to a feature phone, as well as Wi-Fi, internet browsing capabilities, GPS navigation, reading and sending an email etc. But how did it all get started? We will take a look at how the earliest considered smartphone evolved into the today-known smartphone.

Early stages

The first device that can probably be considered as a “smartphone”, although unofficially, is the prototype named ‘Angler’ developed by Frank Canova from IBM in 1992. [1] [2] [6] [8] A refined version of it named Simon Personal Communicator (figure 1.1) was marketed to consumers by BellSouth in 1994. [6] [7] It was the first device ever to feature both phone and PDA capabilities, some of which are: a touch screen, fax and email sending and receiving capabilities, calculator, clock, notepad, world time clock, address book, appointment scheduler, maps etc. [1] [2]



Figure 1: Simon Personal Communicator

In 1996, one of the next devices introduced was the Nokia 9000 Communicator (figure 2) which had even more functionality than Simon. [7] It was running on the GEOS 3.0 and had a graphical web browser, a full QWERTY keyboard and some new exciting applications.



Figure 2: Nokia 9000 Communicator

Ericsson coined the word “smartphone” introducing Ericsson R380 (figure 3) in the late 1999. It was the first device officially labelled as a smartphone and the first featuring the Symbian OS.



Figure 3: Ericsson R380

Microsoft also started their development on smartphone technologies in 1990. After they had begun porting a version of Windows on a mobile phone in 2000, their first released device was in 2002. Windows Mobile had the largest market share in the US because of its popularity.



Figure 4: Qualcomm PDQ 800



Figure 5: Kyocera 6035

Of course, there had been also other companies involved in smartphone development until then. Qualcomm introduced their own PDQ 800 (figure 4) back in 1998 and its successor Kyocera 6035 in 2001. (figure 5)

Mass adoption

The first massively adopted devices were marketed by NTT DoCoMo in Japan. While the change they gave was great, the things were going with a slow pace in the US where the devices still had physical keyboards and were mostly used for serious tasks instead of entertainment. By 2006, Blackberry, also known with the slang 'CrackBerry', changed the things but the devices were still used mostly by business people. The complete change came in 2007 with the first iPhone introduced by Apple. [4] [6] [7] [8] [9]. It gave a completely new innovative appearance to the smartphone so far. [4] It gave the users the opportunity to use the phone's touch screen with a finger rather than a stylus as used in every other previous smartphones. It was aimed at the everyday user.

At that time, Andy Rubin was developing his own mobile OS Android. Having been bought by Google, the first Android smartphone was released in 2008 by HTC. [3] [10] It was the HTC Dream, also known as HTC G1 in the US. Although the rise of Android was much slower in the beginning compared to that of iOS, its openness gave it an advantage over the other existing platforms in the long term. Symbian lost its top position, while Android and iOS continue to be leading the market. There are many other mobile systems, including the well-known Windows Phone that didn't achieve Android and iOS' success.

As we can see smartphones have come a long way from the two-way radios into modern handy devices and they are still evolving every single day. Plain mobile phones are being left in the past in the occurrence of new mobile technologies. What can we expect tomorrow? Maybe a new lifechanging step? We will see.

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