



5G Notes

Middle
Generations

I remember 2.5G as well... Don't you?

"It wasn't official... Just a Marketing term with some promises."


This article could have literally ended here and would have conveyed the same crux as the full text. In different parts of the world there have been many of such terms coined solely for the sake of marketing. Some of them were used more widely than the other ones so they became pseudo-standards.

Generally, a new generation of wireless mobile communication is labeled when there is a massive revamp of provisions compared to its predecessor. Such a transition involves changes in many areas which generally take significant amount of time to roll out. Those changes are including but not limited to broader spectrum, hardware upgrades, network infrastructure upgrade, topology upgrade, security updates etc.

But these changes are very gradual. Generally, a generation lasts almost a decade. So, telecom and mobile phone manufacturers have a lot of time to test new things out. To stay competitive in the market, Telecom providers may decide to launch minor upgrades to the architecture to provide better QoS and prepare for future roll-outs. These changes are significant enough to gain customer attention but not big enough to be called a newer generation.

One of many such cases is 2.5G. 2G in the beginning was simply digitization of communication and it worked on a protocol called GSM which largely relied on TDMA and FDMA. 2G did allow internet browsing but the websites were simply way too bulky for it to handle. Not only that, many of the website features were not even supported on mobile browsers so Mobile internet was a complete mess.

2.5G Introduced GPRS which started the movement of packet switching concept in mobile communication, but it wasn't fully leveraged till early 4G due to slow and gradual roll out of configuration changes in base station Infrastructure. Still, GPRS had finally made mobile web browsing feasible and with WAP which stands for Wireless Application Protocol websites were toned down for mobiles and required less data "pull" requests from servers.



While it was great, it was not as overwhelming as the improvements carried out under 3G like WCDMA and spread spectrum. So, the label 2.5G was never official. It also means that what this article just explained was a general notion of 2.5G and there were many variations in many countries. In fact, 2.5G is not the only one of such sandwich technologies. Globally, there have been many made up terms like 2.5G, 2.75G, 3.5G, 3.9G and so on. Some of these were improvements of main standards while others were early tests of future standards.

Soon enough, customers also started to realize that these are less of real updates and more of marketing tactics. So, the Telecom companies ditched the sandwich numbers and went for an E which tricked billions. But more on that later when the time comes...

Till then,

Happy Learning :)

