EHB415E\_10827 HW2 040170232 Mehmet Deha Diker 12.12.2021

US cellular providers plan to shut down 3G networks at the end of 2022 as bandwidth needs to be freed up to get faster LTE and 5G signals. In fact, this mentioned process has already been started and steps are being taken. This shutdown explains the end of support for old 3G networks by cellular companies gradually. Cellular companies are transferring their legacy equipment and support to newer and faster networks as technology improves and bandwidth increases with the number of users. As a result, slower and older networks are eventually phased out. Many new towers built for "next generation" cellular data support LTE and 5G networks. With the advancement of technology, old towers that support 3G and 4G are out of use. In short, old technologies are being replaced by new and fast technologies in the field of telecommunication, as in every technology.

Legacy devices such as alarm systems, phones etc. will cease to function as companies shut down old equipment that they have for developing and focusing 5G networks.

3G technology is a 20-year-old wireless networking standard. This standard expires in the US next year. Major wireless carriers are planning to phase out this service in late 2022. Simply that means any device operating on 3G, for example, many phones, early iPads or other tablets, and classic Chromebooks etc. won’t be able to connect to cellular data networks anymore. Shutting down 3G technologies are called 3G sunset. And different wireless providers will perform 3G sunset at different times. We can see some 3G sunset dates from the US’s 3 big carriers at the below:

Verizon: December 2022

AT&T: Early 2022

T-Mobile/Sprint: About January 1, 2022

The above and other carriers are shutting down 3G services and infrastructures to make room for newer infrastructures that source faster 4G LTE and 5G network technologies.

Behind this migration/changing, money is one of the most important factor that motivates the 3G sunset Managing LTE and 5G networks is more logistically efficient. You can get more users in a single standard with LTE and 5G networks. Also, there are much less moving parts to deal with. But continuing to serve 3G customers has practical issues as well. Connection Links are operating at different signal frequencies. For example, AT&T is planning to reuse the 3G spectrum which is currently running on for enabling its 5G capabilities fully. The 5G signal will not be as fast as expected unless these wavelengths are present. Providers say 3G must die for the wireless future to develop.

As a result, the reason for stopping the service of 3G networks is entirely due to the development of technology, the fact that LTE and 5G networks are more suitable for today's conditions, and service providers will earn more money. The 3G standard was designed 20-25 years ago. Companies that do not want to stay behind technological developments should not be stuck in the past. This has happened so far and will continue to happen as technology continues to evolve.