Abstract

DFS (Dynamic Frequency Selection) describes a procedure for WLan devices to avoid any interference with a radar (weather or location service). The ETSI as well the FCC defines different test to prove that the WLan device won't disturb any radars.

Because the multiple variants how a radar pattern can occurs, the current DFS detection produce to many false pulses. This has the effect that for devices with a high reliability the DFS frequencies aren't used in a real environment.

To improve the current DFS pattern detector of the open source driver ATH9k, the Atheros wireless chip set AR9380 was first analysed. With the earned knowledge, for example the probability for of detection a good radar pulses or the probability detecting of false pulses based on WLan traffic proposals for detector improvements were made.

Also additional a new proposal to reduce the false pulses rate was found.