Denial of Service Prevention for 5G - DTU Orbit (17/12/2018)

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5G wireless mobile communication is expected to include a large number of advanced technologies in order to further increase bandwidth, Quality of Service (QoS), improve usability and security, decrease delays and cost of service. Software Defined Radio (SDR) will be the platform for advanced terminals. Our focus is security and especially prevention of Denial of Service (DoS) attacks which we believe will become more common in commercial networks through increasing availability of easy programmable SDRs. We propose a secret version of Adaptive Frequency Hopping, as a possible 5G technology in combination with others, with QoS estimation by means of physical layer parameters. The QoS parameter chosen is Bit Error Rate (BER) and this we use for blacklisting frequencies that we assume are under DoS attack. Our experimental results on BER estimation show this to be a promising approach.

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