AP. This is true both with and without a fully loaded micro-cell interference source. In order to achieve a higher user QoS performance, deploying more 802.11n APs is the more spectrally and energy efficient. No more than 3 802.11n APs should be deployed in the same room; any more causes mutual interference and degrades the aggregate QoS received by the users.

Alternative Scenario

The alternative scenario is defined in the body of investigation, in which both FAPs and 802.11n APs have a total bandwidth of 20 MHz with different frequency reuse pattern 1 and 3, respectively. The result of 1 FAP and 1 802.11n AP for both conventional and alternative scenarios are identical as shown in Fig. 4(a).

Fig. 4(c) and Fig. 4(d) show the user QoS, average user data rate and ERG performance for 1 FAP and 3 FAPs in both conventional and alternative scenario with a baseline 802.11n network. In the alternative