Sustainable Service Quality can be a Reality - An Exploration

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ABSTRACT

Smart phones are inevitable part of smart environments and must remain active ideally up to backup time claimed. However, phone's power often gets drained off much earlier than that of expected time. The draining of power in a phone in standby state is attributed to network sensing activity. Network sensing is mandatory to keep the phone connected with the network available and also keeps the hardware tuned for possible other app specific activities. Even phones with same SoC (System-on-Chip) exhibit different drain off time. Thus, question arises -- is network perceived by identical phones experience similar or different events. In this investigative pursuit two chosen smart phones were from two different vendors (Karbonn and Index), having similar chip-set from SpreadTrum. Both the phones equipped with the subscriber identity module (SIM) from identical operator pair. The phones were put on monitoring using ``NeSen App", designed specifically for experiment, for more than weeks time for duration of 8 hours daily. During the monitoring for the response towards the network changes, it is surprising that total reading count of event samples on one phone were lot more in comparison to the other. It was recorded that phone-1 experienced around 40,000 events, while phone-2 has 6,000 events for the same operator and duration. Moreover, maximum signal strength in phone-1 is -87 dbm while on phone-2, it is -70 dbm. Interesting thing is that Cell Id changes over the same period and operator reaches maximum upto 170 on phone-1 while remains 17 only on phone-2. Ensuring the availability of service, network operators are continuously improvising with the feedback from user / user-equipments. But the outcome just discussed makes the choice of solution approach very difficult for Network operators as devices of same SoC are behaving distinctly to same network situation. It is hereby from findings recommended that there has to be some operational cohesion between Smart phone vendors and network operators so as step can be taken towards quality of service from mere connectivity and coverage.

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