

Dynamic Periodic Location Area Update : A New Mechanism for Fast Mobility Database Fault Recovery in 3G Mobile Network

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ABSTRACT

In the 3G mobile networks, the mobile database may suffer from data crashed, and then start a recovery procedure. The 3GPP technique specifications have proposed approaches for the recovery procedure. The recovery procedure proposed by 3GPP may result in the failure of call termination, because the mobile system cannot get the location information of user equipment before the completely recovering from mobile management database VLR (Visited Location Register) crash. In this paper we propose a novel approach based on Dynamic Period Location Area Update (D-PLAU) to shorten the delay of mobile database recovery procedure. Besides, our method also reduces the cost of recovery procedure and consequently increases level of service quality. The simulating results shows that delay of recovering the record of mobile equipments are reduced, but the traffic of message transmitting is slightly raised.

Keywords : Personal Communication Service Networks, Periodic Location Area Update, VLR, Mobility Database Failure Recovery

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