A New Method for Fast and Low Cost Handover in Leo Satellites

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Abstract

Now-a-days LEO satellites have an important role in global communication system. They have some advantages over GEO & MEO satellites such as power requirement and end-to-end delay is lower and it has more efficient frequency spectrum utilization between satellites and spotbeams. So in future they can be used as a replacement of modern terrestrial wireless
networks. But they main problem of LEO satellites is that they have large relative speed than the speed of mobile nodes (MN) & earth. That’s why the handover occurrence is more. So the call blocking probability (Pb) and force call termination probability (Pf) is also higher. To overcome this problem several handover techniques is proposed. Here we propose Billboard Manager based handover (BMBHO) technique using the concept of Billboard Manager (BM) proposed by Aysegul et al in 2006 but in a different way. Here we reduce the scanning time significantly. Also the cost is reduced. Here we also describe how to reduce (Pf). In this paper you will find a set of simulations both for our proposed method & standard handover methods. We can find that this method is very useful by the simulation results.

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