Cost Analysis of Location Manager based Handover Method for LEO Satellite Networks

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Abstract

Low Earth Orbit (LEO) satellite made a great effect to the scientists towards the end of the
previous decade because of its some interesting features such as low propagation delay, low power requirements and the ability to communicate with handheld terminals. That's why future satellite networks are now conceived as complementary rather than competitive to terrestrial networks. But as the speed of LEO satellite is higher than Mobile Nodes (MN) and earth's speed, the no of handover occurrence is more which degrades the overall communication quality. Also the call blocking probability and forced call termination probability is more. To solve these problems, a number of handover methods have been proposed by different scientists. In our previous work we have proposed a fast method for handover named Location Manager Based Handover method for LEO satellite networks where we have use Location Manager (LM) for reducing the scanning time. LM is used to store all the mobility pattern of all the satellites. Here we have analyses the total cost of LMBHO method. To know how this method works, we have compared it to the cost of the standard protocol mobile IP by a set of simulation. Result shows that it can significantly reduce the handover cost.

References

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Index Terms

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Keywords

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