Micropayment is an electronic payment system for small value transaction. It needs to use a little amount of resources, such as communication and computation due to the small value payment. There are three main existing approaches to the micropayment, namely Millicent, NetCents and MiniPay. We argue that those existing approaches not only suffer from some problems, but also consume a great amount of resources. In this paper, we propose an agent-based approach to micropayment which does not suffer from problems in the existing approaches and employ a smaller amount of resources than the existing approaches.