Research of Pre-Authentication for WiMAX Handover

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ABSTRACT

The wireless communication network techniques continuously develop diversification applications. In wireless communication network, it is very important to keep the communication smooth especially for Multimedia Real-Time Services. Smooth, Fast, or Seamless Handover schemes are the most popular topic of nowadays. A lot of efforts were made to shorten the delay of Handover, including the omission of authentication procedure. The advantage of these methods is the Data transmission can be revived in advance. Unfortunely, These methods result in security vulnerability. In this paper, we proposed an improved Handover algorithm named“ Anticipative Real-time service Reviving(ARR)“, which can significantly reduce the Handover delay of real-time services, for IEEE802.16e. In the proposed, Real-time Services regain data transmission before Handover completes. The proposed scheme applied Pre-Authentication(PA) method, which makes the authentication procedure during Handover process omitable. In this way, it does not introduce security vulnerability. Thus, the proposed scheme shortens Handover delay and also guarantees the security of Handover process. By integrating Pre-Authentication and ARR(called PARR), we proposed a fast and safe Handover procedure.

Keywords : Handover、IEEE802.16e、WiMAX、PKMv2

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