Design and Implementation of a General Mobility Model for the Simulation of Mobile Communication Protocols

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ABSTRACT

In mobile wireless networks, the network performance is expected to be highly correlated with the mobility pattern of mobile hosts. Therefore, whether the adopted mobility model describing the mobility behavior of mobile hosts coincides with the real situation would incur a great impact on the feasibility of network simulations. In this thesis, we propose the design and implementation of a general mobility generator named Visual Mobility in an attempt to provide a realistic mobility model for mobile wireless networks. In Visual Mobility, movement descriptions of mobile hosts are based on the mobility generator — " setdest " provided in NS-2 simulator. Through a visualized user interface for describing the deployment region of wireless networks and tentative hosts with their moving parameters within the region, Visual Mobility can accurately transfer the described scenario into those TCL scripts supported in NS-2 for directing the movements of mobile hosts. Simulation results show the veracity of Visual Mobility can be achieved.

Keywords : NS-2模擬器 ; 移動樣板 ; setdest ; 邏輯群組移動模型

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