Impact of Realistic Indoor Mobility Modelling in the Context of Propagation Modelling on the User and Network Experience

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Abstract:

Algorithms that depend on the simulation of individual users (e.g. SON handover optimization) need a microscopic user mobility that fits to the chosen prediction model. Any im-provement in the accuracy of pathloss predictions (e.g. from Extended Hata to ray-optical predictions with outdoor-to-indoor mapping), either in terms of spatial resolution or in terms of the underlying propagation model, need an improvement in the mobility model as well (Random Walk to Indoor Mobility). Therefore, a new sophisticated three dimensional indoor mobility model based on real building data is proposed in this paper. Furthermore, investigations on the degree of modelling and its impact on user and network simulations is shown.