A wireless personal area network (WPAN), which is virtually a synonym since almost any personal area network would need to function wirelessly. Working on WPAN networks will enable us to gather advance knowledge about ongoing research on WPAN networks and invoke us to contribute new ideas towards WPAN and its emerging services. The main focus of this research is to investigate the different factors which are important for the formation of WPAN. We will propose and investigate novel handover algorithm that causes handover of the Master Device quickly and efficiently in Wireless Personal Area Network. Handover process, which needs to be fast and efficient for it not to have an effect on the mobile user’s ongoing communication, occurs when a mobile user migrates to a different channel or to an adjacent cell. The proposed handover algorithm will be presented, modeled and simulated in this paper. WPAN standard have defined two standard handover algorithms based on Reachability and Stability for the handover of master device in WPAN. These two techniques will be combined and simulated and compared with the battery power selection technique by OPNET modeler. Simulation results presented in this paper is to prove that the initiation of a
PAN can be started with a TM, which could readily handover to the acquired PAN node which meets the master device (MD) selection criteria.

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Index Terms

Computer Science Evolutionary Computation
Key words

Wireless Personal area network
MD
Performance comparison
OPNET modeler