UNIVERSITI TEKNOLOGI MARA

FACILITATING PDE-NEMO NESTED APPROACH USING DYNAMIC HOST CONFIGURATION PROTOCOL

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ABSTRACT

A Personal Distributed Environment (PDE) is a personal communication concept designed for future mobile communications. In a single PDE, there exist several Sub-networks hosting devices located across the infrastructure, which are all interconnected and managed by entity called Device Management Entity (DME). Some of these Sub-networks are fixed and some are mobile. One of the major issues concerning the Mobile Sub-networks in a PDE is the convergence and de-convergence process. There are two approaches proposed to handle the convergence and de-convergence of Mobile Sub-networks namely the Nested Approach and Merged Approach. In the Nested Approach there is an issue of providing the Parent Mobile Router with extra information by the DHCP Server. In this research, two methods are proposed to handle the issue. The two methods are compared by use of a simulation model in order to select the best method to be used by the PDE-NEMO Nested Approach.

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