Reconfigurable Ubiquitous Computing Infrastructure for Load Balancing

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Abstract : Ubiquitous computing helps make data and services available to users anytime and anywhere. This makes the cooperation of devices a crucial need. In return, such cooperation causes an overload of the devices and/or networks, resulting in network malfunction and suspension of its activities. Our goal in this paper is to propose an approach of devices reconfiguration in order to help to reduce the energy consumption in ubiquitous environments. The idea is that when high-energy consumption is detected, we proceed to a change in component distribution on the devices to reduce and/or balance the energy consumption. We also investigate the possibility to detect high-energy consumption of devices/network based on devices abilities. As a result, our idea realizes a reconfiguration of devices aimed at reducing the consumption of energy and/or load balancing in ubiquitous environments.