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Realisation of a Smart Plug device based on Wi-Fi technology for use in Home Automation systems

Existing devices used in home automation are mostly based on Zigbee or Z-Wave technologies. While these solutions are proven, they require additional hardware to be used as gateways. These technologies are based on mesh topology and often require additional routers to provide better connectivity. This increases cost of the system, and can increase communication latency time. Device described in this paper tries to solve these problems using Wi-Fi technology, based on star topology, with no additional hardware needed. Purpose of this paper is to compare the performance of an existing Zigbee solution with a device based on Wi-Fi technology.