



Urban Bilstrup, Katrin Bilstrup, Bertil Svensson and Per-Arne Wiberg,

"Using dual-radio nodes to enable quality of service in a clustered wireless mesh network"

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Abstract

In this paper some well established wireless technologies are merged into a new concept solution for a future industrial wireless mesh network. The suggested clustered wireless mesh network can handle probabilistic quality of service guarantees and is based on a dual-radio node architecture using synchronized frequency hopping spread spectrum Bluetooth radios. The proposed architecture gives a heuristic solution to the inter-cluster scheduling problem of gateway nodes in clustered architectures and breaks up the dependence between the local medium access schedules of adjacent clusters. The dual-radio feature also enables higher network connectivity, implying, for example, that a higher link redundancy