

# Wireless Ethernet

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This dissertation explores the design of a flexible, distributed Medium Access Control (MAC) protocol without central control, aiming to increase spectrum efficiency compared to shared bandwidth fixed spectrum allocation while allowing for simultaneous full-duplex communication.

The proposed MAC provides a means to establish a dedicated full-duplex point-to-point link between two nodes using cyclostationary signatures for signalling. The proposed MAC may also benefit from advances in developing full-duplex transceivers to reduce the required transceiver count.

A prototype implementation using MATLAB as well as stub implementations in Simulink and Iris are discussed.