

## ABSTRACTION

An amount of existing railways are limited, so that be needed a good centrally arrangement for train movement by applying train dispatching system to form a train communication system, where there are one station center (dispatcher) controlling train movement through communications with an amount of train and station which in its coverage region (section). Arrangement conducted by collecting status from each stations (waystation and train) using signaling mechanism, and also use voice communications through microwave and VHF links. A whole system formed by dispatcher, train, waystation, basestation, and tunnel of radio repeater. Basestation serve voice communications for stations in its coverage area through VHF links, while basestation relation use microwave links. Tunnel radio repeater is used to serve voice communications through long enough tunnel, while voting mechanism is applied as method to process hand-over inter basestations. This final project analyse implementation and configuraton of train dispatching system and also performance of VHF and Microwave communication links. Overall analysis indicate that performance of each links are good enough and able to fulfill standard parameters in test performance such as receive signal level, fading margin, availability and BER. Feebleness layed in mechanism of train position polling, so that this final project also propose more effective new mechanism scheme.

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