Frequency Division Duplexing

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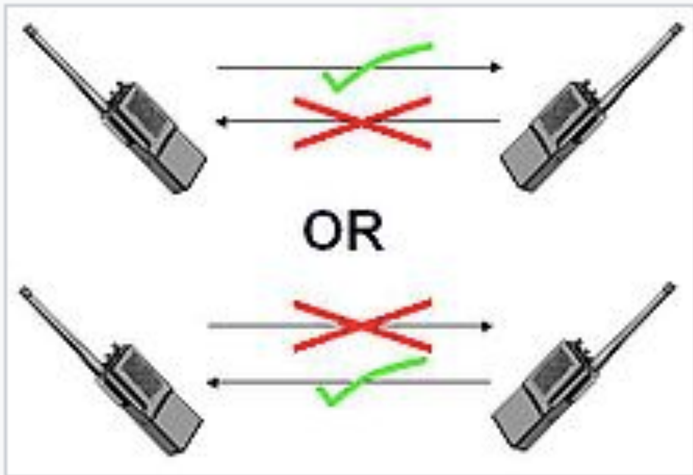
Duplexing

- Point to Point System.
- Communicate in both directions.
- 2 types of duplex communication system
    - Full Duplex
    - Half Duplex

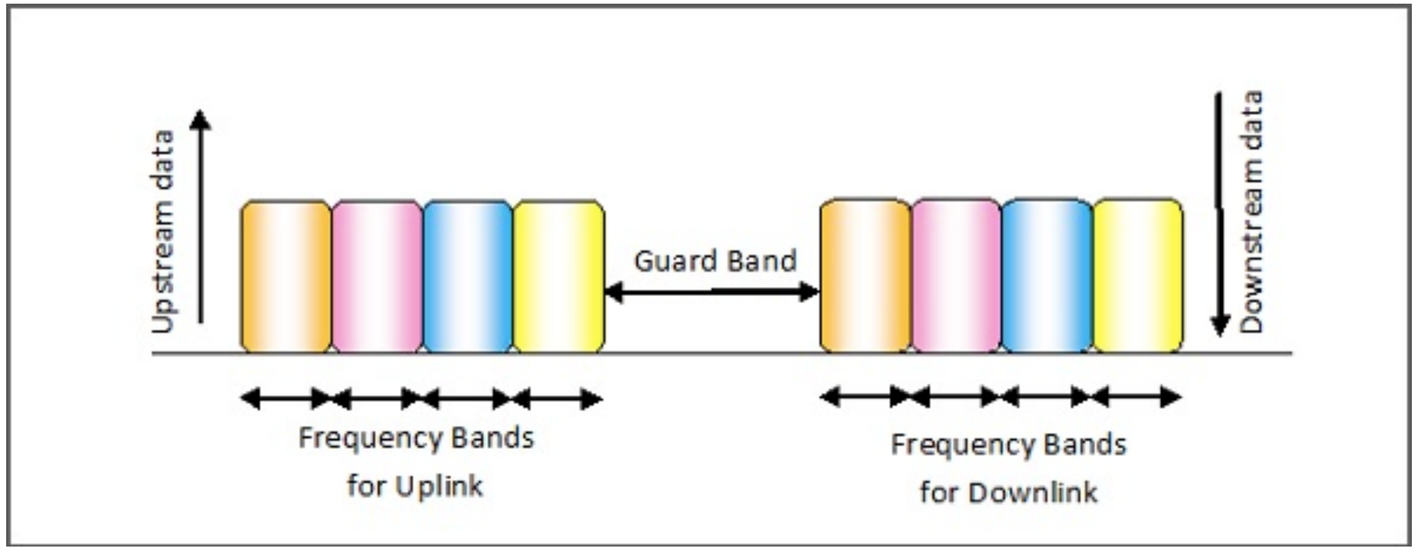


A simple illustration of a half-duplex communication system

A simple illustration of a full-duplex communication system. Full-duplex is not common in handheld radios as shown here due to the cost and complexity of common duplexing methods, but is used in telephones, cellphones and cordless phones.

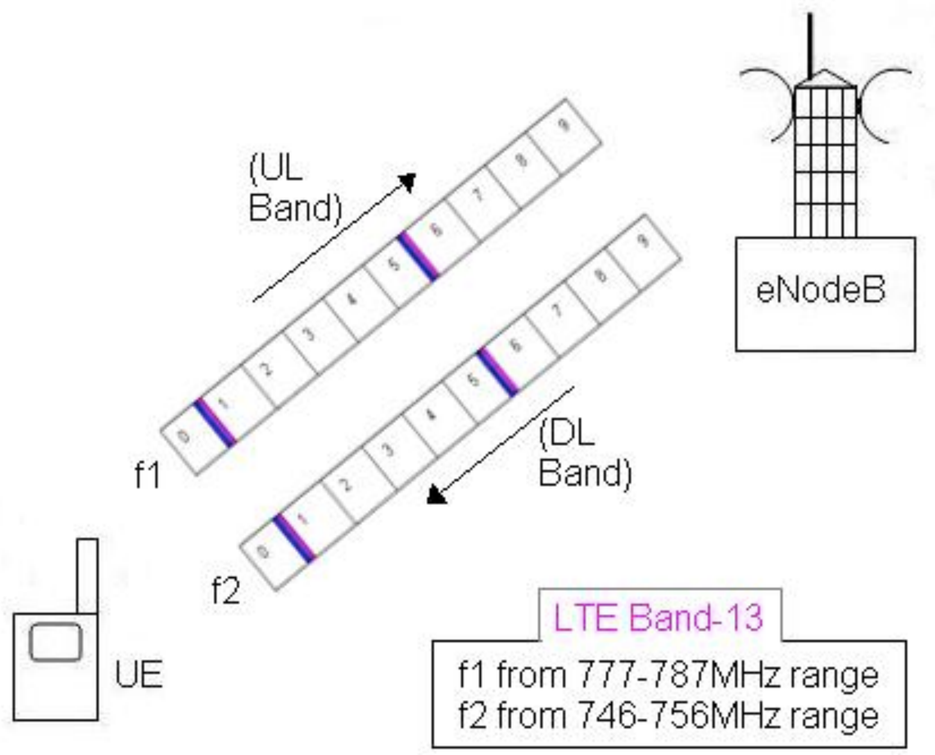
Frequency Division Duplexing

- Communication technique where transmission and receiving of signals are on different frequency.
- Since different frequencies are used for uplink (sending) and downlink (receiving) , signals do not interfere with each other.



FDD in Cellular Network

- Cellular networks use FDD to separate channels.
- One spectrum for uplink.
- One spectrum for downlink.
- Each block of electromagnetic spectrum is divided into number of channels.



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