



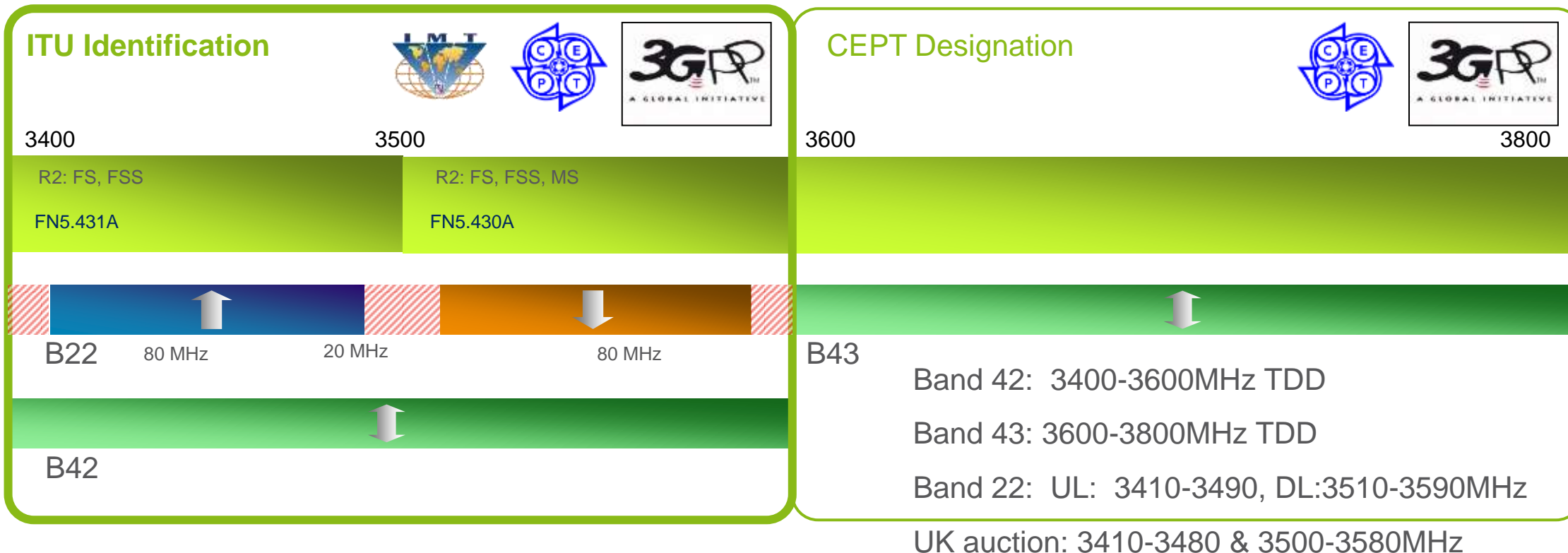
ERICSSON

# ERICSSON LTE EXPERIENCES 3.5 GHz BAND

LTE SUBSCRIPTIONS

1H 2014 298 012 134

# 3400 – 3600 MHz AND 3600 – 3800 MHz ARRANGEMENTS IN EUROPE



› FDD Alternative recognized by European operators.

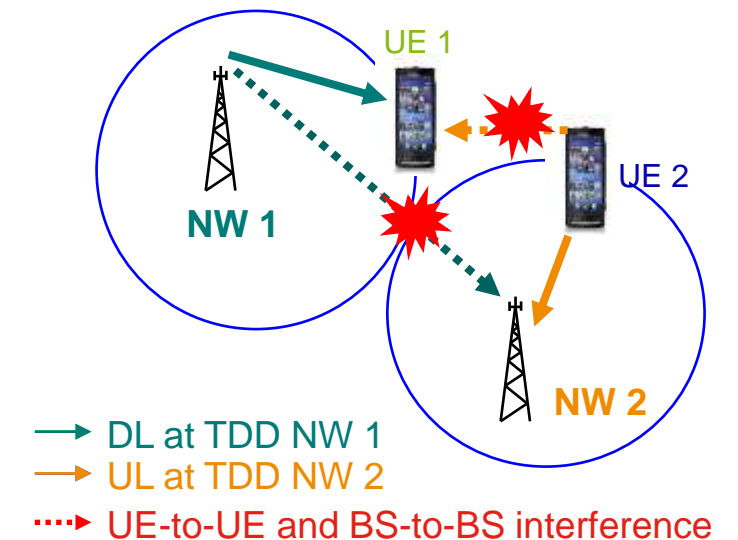
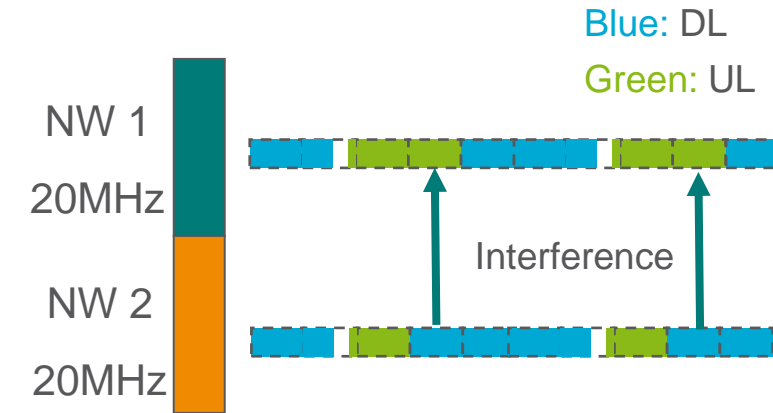
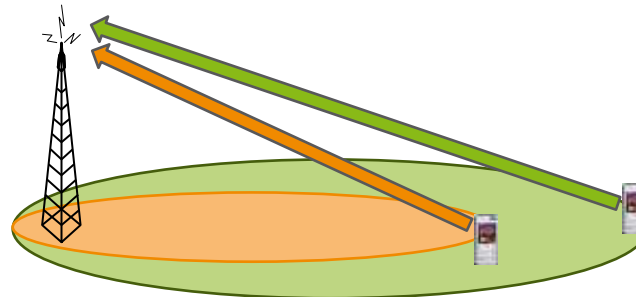
› Orange France: 3.5 GHz FDD trial

<http://vimeopro.com/warmuprod/35-ghz-fdd>

# TDD DRAWBACKS



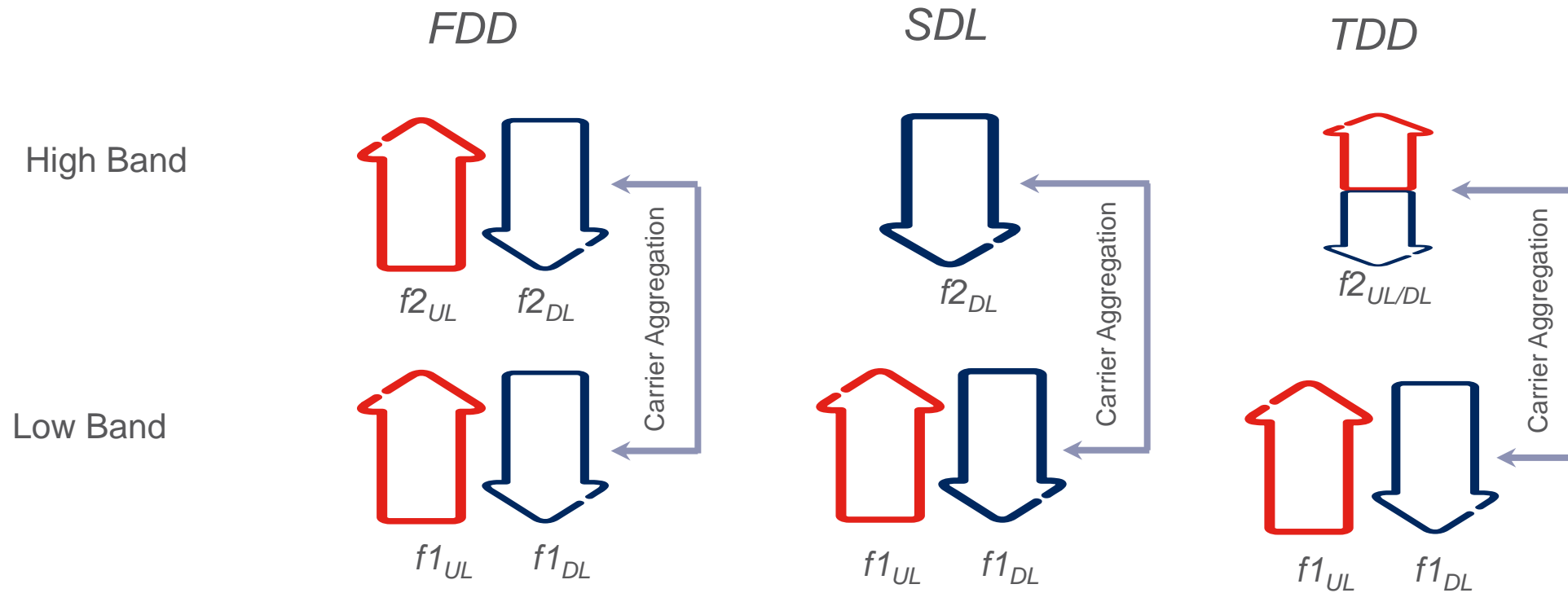
- › Peak rates for TDD (config 2) are lower than for FDD
- › Time domain co-ordination necessary for two TDD networks at same frequency band
- › Synchronize networks and use same UL/DL configuration
- › TDD puts higher requirements on eNodeB synchronisation than FDD
- › TDD (config 2) UL app coverage -7 dB worse than FDD at same frequency (~20% less effective average UE Tx power at cell-edge)



# SUPPLEMENTARY DOWNLINK – SDL



Many operators in 3GPP are discussing LTE FDD+TDD  
Carrier Aggregation using TDD as **DL only band**

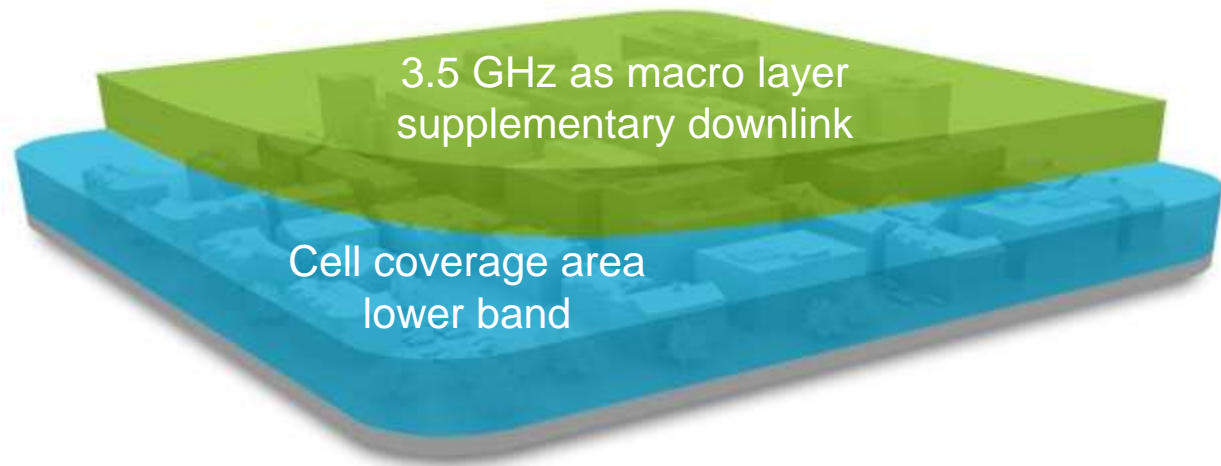


SDL: CA with LTE FDD DL in unpaired spectrum  
App coverage improved in DL, maintained in UL

# 3.5 GHz WITH SDL & ASA

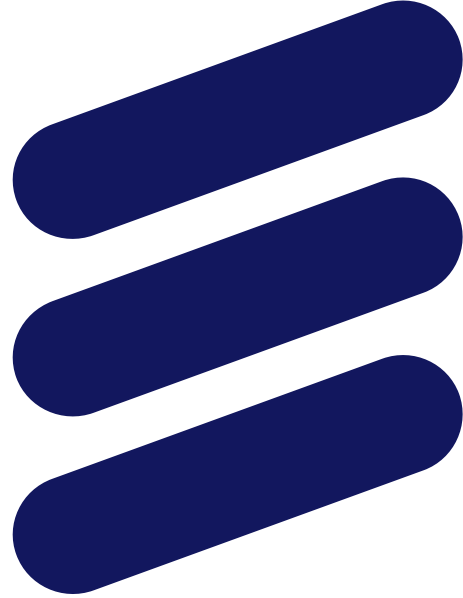


Inter Site Distance	Users covered by 3.5 GHz
300 m	100%
500 m	96%
700 m	92%



- › Worlds first Supplementary Downlink (SDL) on LTE
  - Demonstrating 10 MHz FDD on Band 4 with 10 MHz downlink only on 3.5 GHz
  - Supplementary downlink an option for maximum performance in unpaired carriers
- › 3.5 GHz band valuable for MBB
  - For adding macro network capacity
  - For hot spot fill in with small cells
  - Authorized Shared Access (ASA) open up spectrum in some markets

[ Ericsson offer a complete 3.5 GHz portfolio, macros to small cells, TDD and FDD ]



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