

MODULATING SIGNAL DESCRIPTION - MODIFIED

Applicant Spectrum Telecom, Inc. ("Spectrum Telecom") proposes to the following parameters for its modulation.

Navini Equipment:

Multi-carrier Synchronous CDMA
5 MHz channels
10 – 500 kHz sub-carriers
10 ms TDD Timing
400 khz Carrier Chip Rate
32 chips TCC, 64 chips Sync
QPSK, 8PSK, 16QAM Uplink, QPSK Downlink
Dynamic based on SNR evaluated every 10 ms.
Transmission efficiency is 66.5% (includes LLC)
BER: 10 to the minus 3, before FEC
Forward Link: Beam Forming
Reverse Link: Spatial Filtering: Enhanced Nulling

Aperto Equipment:

Multi-carrier Synchronous ATDMA
7 MHz channels
10 – 500 kHz sub-carriers
10 ms TDD Timing
400 kHz Carrier Chip Rate
32 chips TCC, 64 chips Sync
QPSK and 16QAM, Adaptive
Dynamic based on SNR evaluated every 10 ms.
Transmission efficiency is 66.5% (includes LLC)
BER: 10 to the minus 3, before FEC
Forward Link: Beam Forming
Reverse Link: Spatial Filtering: Enhanced Nulling

Redline Equipment:

Multi-carrier Synchronous ATDMA

14 MHz channels

256 kHz sub-carriers

10 ms TDD Timing

400 kHz Carrier Chip Rate

32 chips TCC, 64 chips Sync

QPSK, 16QAM and 64QAM, adaptive

Dynamic based on SNR evaluated every 10 ms.

Transmission efficiency is 66.5% (includes LLC)

BER: 10 to the minus 3, before FEC

Forward Link: Beam Forming

Reverse Link: Spatial Filtering: Enhanced Nulling