

Advantages of Digital COFDM Microwave over Analog Microwave

- Spectrum Efficiency
 - Requires 1/3 the bandwidth of analog.
 - FM typically occupies 17 MHz. COFDM currently occupies 8 MHz, allowing 2 signals in the current FM allocation. Will improve to 6 MHz in the future.
- Robust Signal
 - COFDM performs inside buildings, through walls, and around corners (Non line-of-sight).
- Quality consistency
 - MPEG-2 encoding provides consistent video & audio performance. Quality of picture received is same as quality of picture transmitted (provided there is error correction).
- Forward Error Correction - Recovers data bits lost during transmission. (Note: there is more overhead associated with robust error correction that results in a decrease in throughput). Analog links result in frequent loss of data.
- Scalable performance
 - MPEG coding rate is adjustable for picture quality & processing delay. COFDM parameters can be adjusted to improve the MPEG coding rate, or increase error correction, or increase link robustness.
- Encryption
 - Inherent digital encryption capability allows for added security of data. Analog links require 3rd party scramblers for security.