Supplementary Lecture 5B
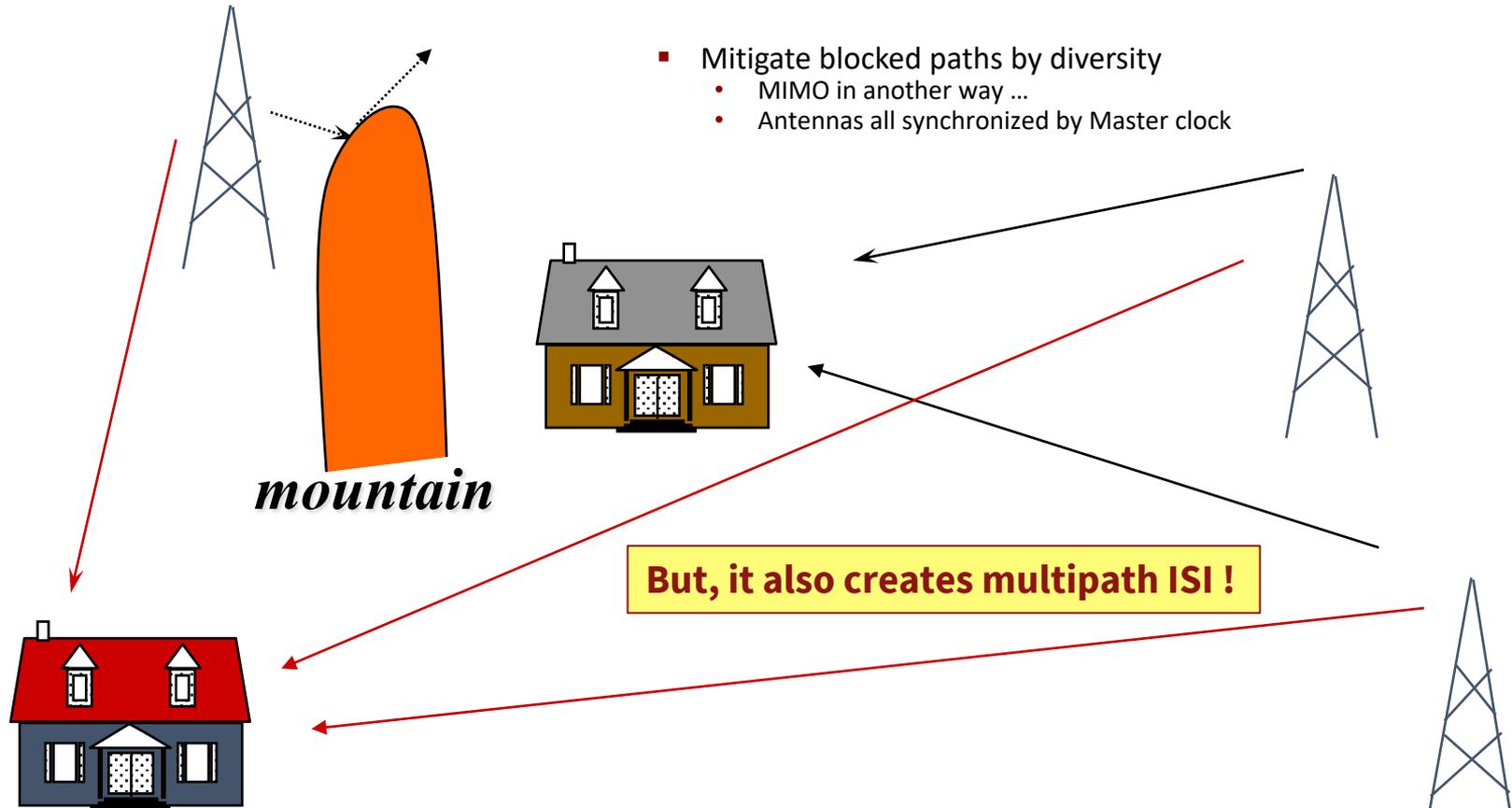
Digital Video Broadcast Example

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Single-Frequency Network (SFN)

- Mitigate blocked paths by diversity
  - MIMO in another way …
  - Antennas all synchronized by Master clock

mountain

But, it also creates multipath ISI !

DVB Standard uses Coded OFDM

- Parameters

carrier(s)	Carrier frequencies are same as analog TV spacing 6 MHz, 7.61 MHz, 8 MHz	*52 MHz = channel 2*
sampling	$T'=10.9375$ ns	$\dfrac{1}{T'} \cong 9.14\,\text{MHz}$
symbol size	$N=2048$ or 8192	
tone width	$\Delta f = 44.64$ kHz	Or 11.16 kHz
prefix (es)	$v = \left(\dfrac{1}{2^i}\right)\cdot N \quad i = 2,3,4,5$	**DVB uses LDPC code mentioned in 379A.**
symbol rate	Symbol rates vary ~ 10 kHz	

End Supplementary Lecture 5B