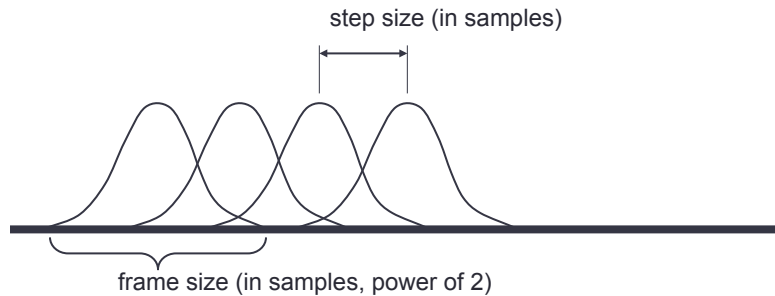


Windows and Step Size



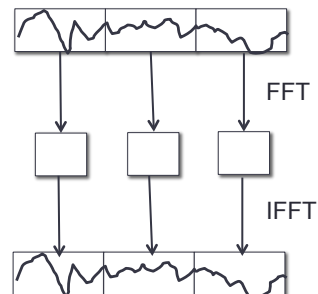
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1

Perfect Reconstruction?

- Converting to frequency domain and back opens up many possibilities. Can we do this without loss?
- FFT can be inverted: IFFT
- Simple but flawed approach:
 - Square windows, no overlap



- What about windowing?

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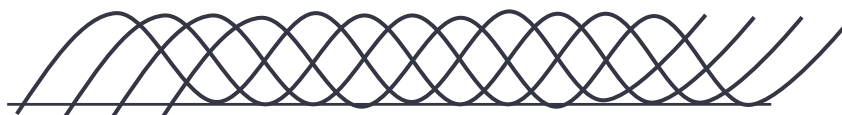
2

Perfect Reconstruction? (2)

- There are many overlapping windows that sum to one:



- But windows are applied twice!
 - Window \rightarrow FFT \rightarrow (alter signal) \rightarrow IFFT \rightarrow Window



- Raised \cos^2 with 25% overlap sums to one!