Motivations
Channel-wise subband feature

- What's is channel-wise subband feature?

  1. Subband analysis

  2. STFT

  3. Concatenate in channel dimension.
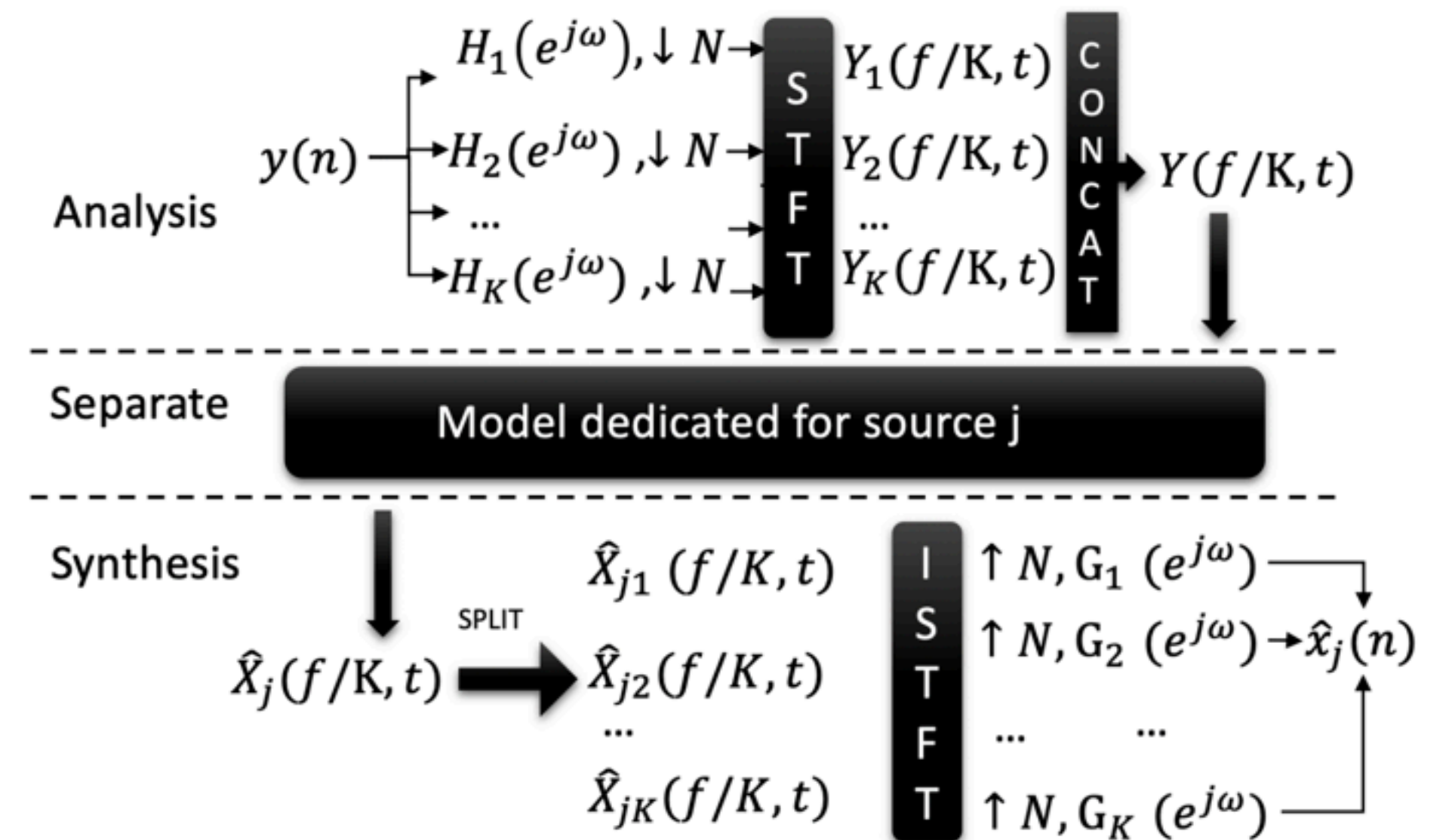

Figure 3: *Channel-wise subband input*

Motivations
Channel-wise subband feature

- Why channel-wise subband feature?

  - Reduce CNN kernel global sharing.

  - Larger receptive field.

  - Reduce computations (75%).

$$Y = f_1(|X|) = [Y^{(c)}]_{c=1,2,...,C}$$

$$Y^{(c)} = k^{(c)} * |X|$$

$$Y' = f_2|X'| = [Y'^{(c)}]_{c=1,2,...,C}$$

$$Y'^{(c)} = \sum_{j=0}^{4} (k_j^{(c)} * |X'|_j)$$