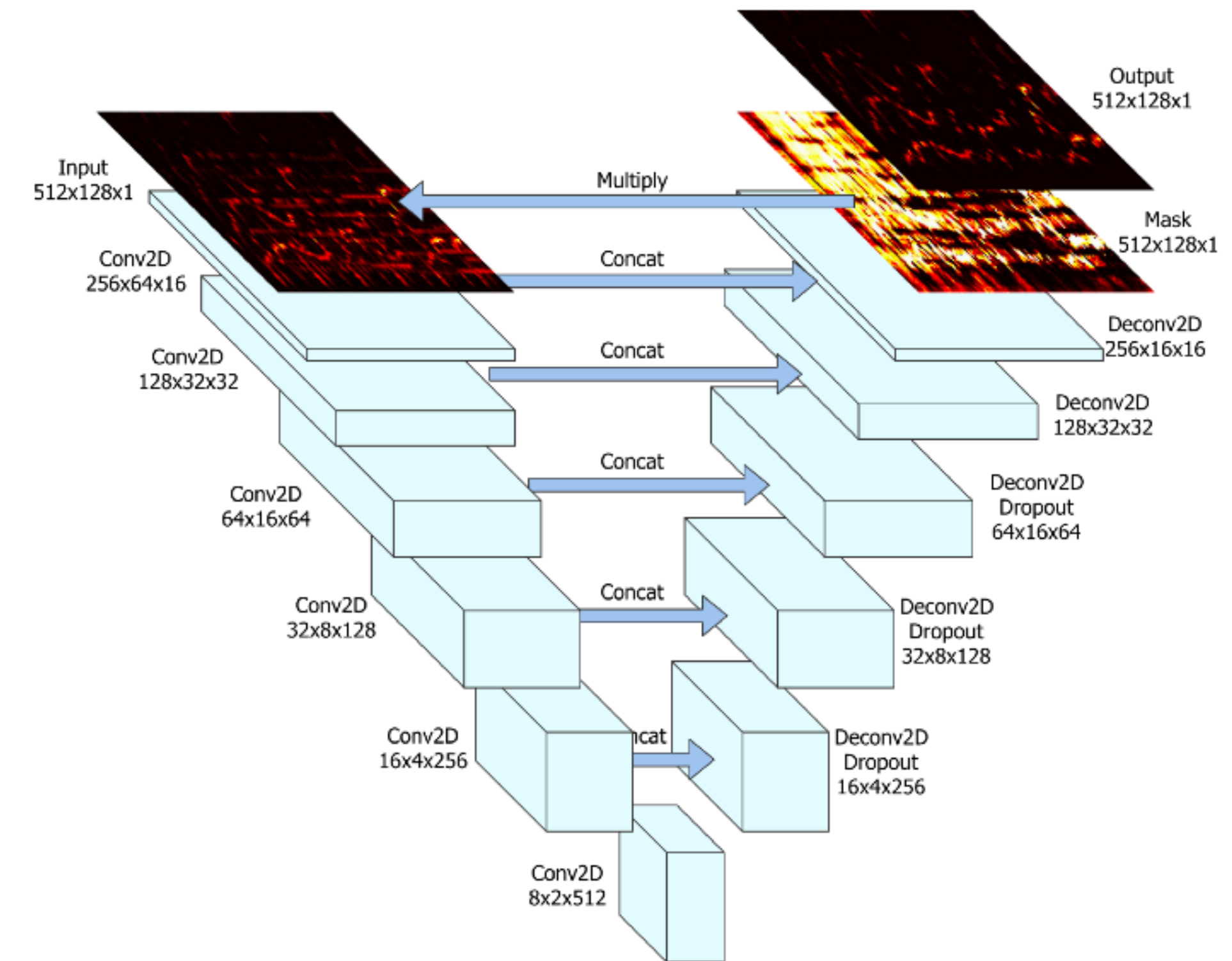


# Related works

## Frequency domain methods

- Treat spectrograms as images.
  - Similar to image segmentations.
- What's the difference?
  - Overlapping pixels.
  - Spectrogram has complex values.



Jansson, A., Humphrey, E., Montecchio, N., Bittner, R., Kumar, A., & Weyde, T. (2017).  
Singing voice separation with deep u-net convolutional networks.

# Related works

## Frequency domain methods

- Work on frequency spectrograms
  - Spectrogram mapping
  - Mask estimation
    - Ideal binary mask (IBM) estimation [Wang et al. 2005].
    - Ideal ratio mask (IRM) estimation [Narayanan et al. 2013].
    - Complex ideal ratio mask (cIRM) estimation [Williamson et al. 2015].