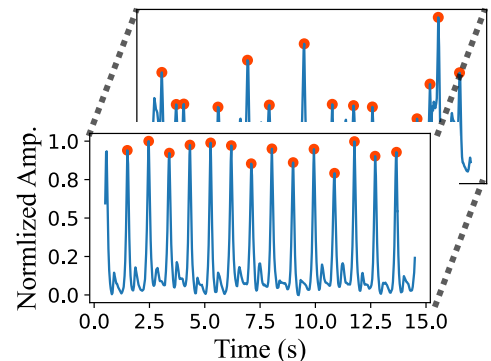
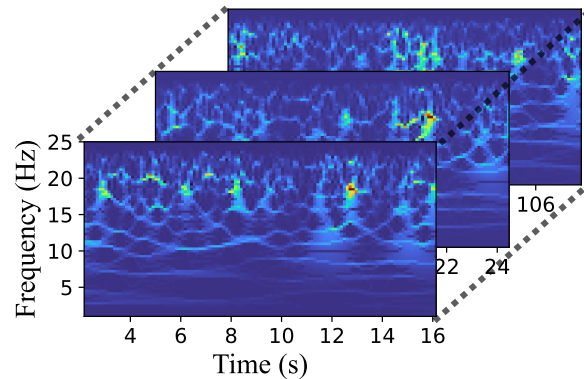


**(a) Single Cycle ECG Length Estimation**



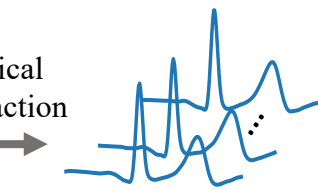
Energy Plot with Detected Peaks  $\times 50$

**(b) Single Cycle ECG Generator (SCEG)**



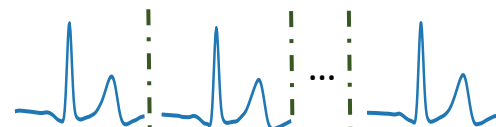
Spectrogram Slices (in time sequence)

Morphological  
Feature Extraction

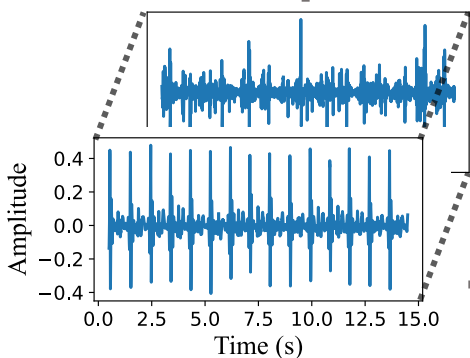


Estimated single cycle ECG  
(in time sequence)

Resample  
&  
Reshape

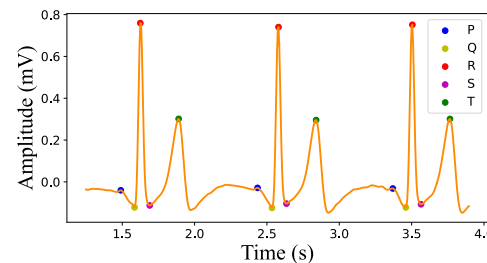
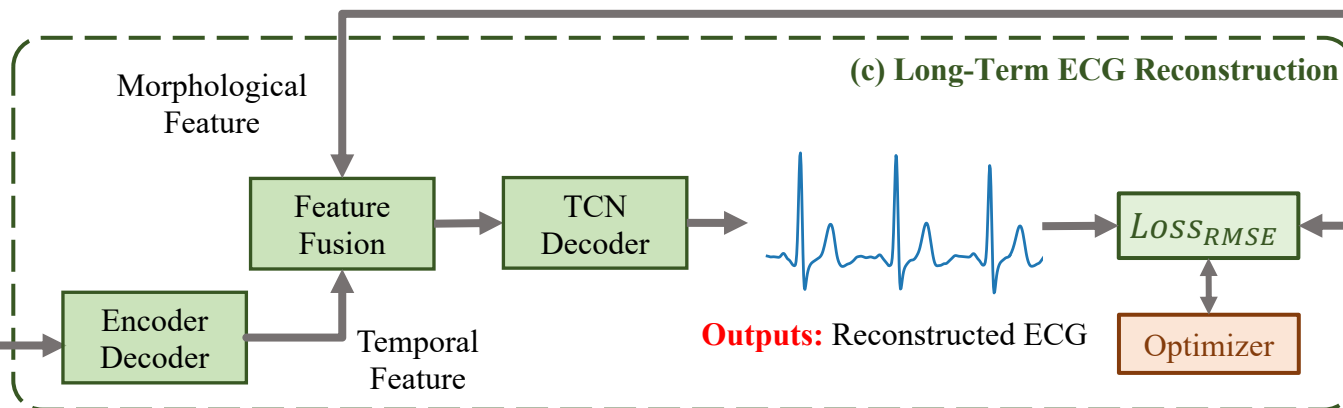


Concatenated ECG Pieces  
(Morphological Reference)



Inputs: Raw Radar Signals  $\times 50$

**(c) Long-Term ECG Reconstruction**



Ground Truth with  
Labeled Peaks