

Beat Tracking

1. How does beat tracking differ from onset detection?

Onset detection is the process of defining the beginning of a new sound by looking at temporal and spectral changes in the incoming signal. Beat tracking is the process of identifying which of those sounds are used by the listener to characterize the rhythm of the piece as defined by sounds that are separated by a consistent inter-onset time interval.

2. What is onset strength? What is the onset strength envelope?

Onset strength is the combined relative proportion of onset energy across the desired perceptual frequency bands. The onset strength envelope is function that describes the change in onset strength across time.

3. What is a global tempo estimate?

A global tempo estimate is the best guess of the tempo of a piece as calculated by beats per minute, which is determined by using the predominant inter-onset time interval.