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# **Music Signal Decomposition Based on Sequential Identification and Subtraction of Components**

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The article deals with a novel approach in audio signal decomposition, with possible application on music. A mixed signal is built up from the audio components. Consecutive segments of the components present in the mixed signal are identified with the components contained in a set. Once a component is identified, it is removed from the mixed signal. There is an original observed audio signal (a song) being a composition of anything - from the tone A of the piano to the drum loop in a popular song (the audio component). Then we are given a set of audio components. We expect that it is possible to combine the observed signal from the audio components in the set or their derivatives. The derivatives may be created by the convolved components, or by the components having cut off an arbitrarily long part of their beginning / end. We can examine the two tasks:

1. To recognize the components which the original signal is combined from, find their positions in time, or find their possible transformations leading to the derivatives being presented in the original signal.
2. To investigate the conditions ...