Abstract

In this paper the design of a totally multiplier-less M-Channel Modified Discrete Fourier Transform (MDFT) Filter bank with Perfect reconstruction has been proposed. Canonic Sign Digit (CSD) based Finite Impulse Response (FIR) prototype filter with low implementation complexity is designed. The performance of the MDFT filter bank designed with this filter is optimized using Artificial Bee Colony (ABC) algorithm. This design leads to very low implementation complexity and hence low power dissipation and low chip area, which are desirable in upcoming applications such as software defined radio, wireless communication and portable computing systems.

References

- Bindiya T. S. and Elias, E (2014, February). Design of multiplier-less sharp transition...


**Index Terms**

Computer Science

Circuits And Systems
Keywords

Multiplier-less Modified DFT filter banks with Perfect Reconstruction  Canonic
Signed Digit
Artificial Bee Colony Algorithm