Robust System Architecture for DOA Estimation based on Total Forward Backward Matrix Pencil Algorithm

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 126 - Number 4

Year of Publication: 2015

Authors:
Han Trong Thanh, V.U. Van Yem

10.5120/ijca2015906033

Abstract

Radio Direction Finding (DF) is a technique that identifies the bearing angle or the coordinates of an incoming radio signal(s). The primary function of DF is to get the Direction of Arrival (DOA) information. In this paper, we propose the robust system architecture for DOA estimation using the Total Forward - Backward Matrix Pencil Method (TFBMP). This method works directly on signal samples of incoming signals received by an M-element Uniform Linear Antenna (ULA) array. The simulation results for DOA estimation of RF signals using the proposed system will be shown and analyzed to verify its performance.

References

2. Yem. VV, Delai Aziz Benlarbi. 2006 "New receiver architecture for localisation system." In


Index Terms

Computer Science

Wireless

Keywords

Direction of arrival (DOA); Wideband signal; Total Forward-Backward Matrix Pencil (TFBMP), Uniform Linear Antenna Array (ULA).