An approach for passive radar using a smart antenna system

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Abstract: An antenna without phase center system used for DOA estimation and beam steering was introduced in [1], [2]. In the radar problem, the antenna can receive the signals scattered from a moving target. In this paper, an approach for passive radar using a smart antenna system is introduced. We assume that the primary transmitted signal comes from a known fix voice broadcasting station. The principle of the passive radar are presented. ?? 2008 IEEE.

Author Keywords: Antenna without phase center; Direction of arrival; Doppler frequency; Passive Radar

Index Keywords: Beam-steering; DOA estimations; Doppler frequency; Moving targets; Passive Radar; Smart antenna systems; Transmitted signals; Antennas; Doppler effect; Mobile telecommunication systems; Radar; Radio direction finding systems; Smart antennas; Direction of arrival

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References:

1. Phan Anh and Tran Cao Quyen (2005) IEEE Antennas and Propagation International Symposium, 4 A, pp. 134-137. , DOA determination using an antenna system without phase center and MUSIC algorithm, July
2. Space diversity beam steering microstrip BTS antenna system for 3G and 4G, Tran Cao Quyen et al, IEEE Antennas and Propagation International Symposium, pp. 1693, June, 2007(1971) Detection, Estimation, and Modulation, 3. , Harry. L. Van Trees, John Wiley and Sons, Inc
3. Phan Anh (1986) Monograph, , Antenna without phase centers and their application in radio engineering, Wroclaw, Poland