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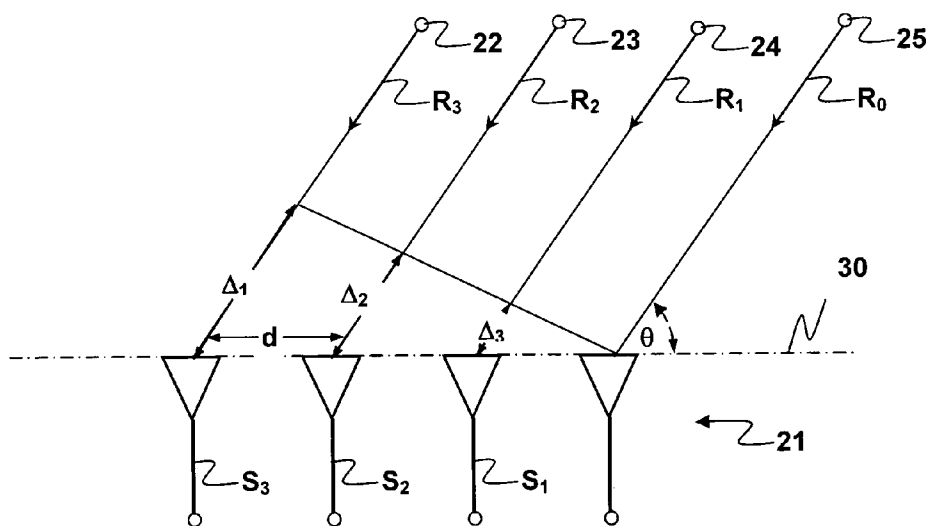
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(54) Title: METHOD AND SYSTEM FOR DETECTING SIGNAL SOURCES IN A SURVEILLANCE SPACE



(57) Abstract: A respective electromagnetic parameter and spatial disposition of an unknown number of signal sources in a surveillance space simultaneously bombarded by multiple signals are determined by receiving multiple signals at each of a plurality of widebeam, wideband antennas equally spaced apart in a linear array. Respective antenna signals are simultaneously sampled to generate a two-dimensional array of values. A two-dimensional Fourier transform is computed whose peaks satisfy one or more predetermined criteria, each peak being indicative of a signal source in the surveillance space, whereby the location of the peak in the Fourier transform Fjk indicates the frequency and the azimuth of the respective signal source and the amplitude of the peak indicates the amplitude of the signal source. When implemented using two mutually perpendicular arrays of receiving antennas, an additional Fourier transform of the two-dimensional Fourier transform generates, for each identified emitter, independent azimuth and elevation angles.