

Title (en)

Control of beam direction for antenna system with electronic scanning and beamforming by computation.

Title (de)

Steuerung der Ausrichtung für Antennensystem mit elektronisch gesteuerter Auslenkung und Strahlformung durch Berechnung.

Title (fr)

Commande de pointage pour système d'antenne à balayage électronique et formation de faisceau par le calcul.

Publication

EP 0415818 B1 19940511 (FR)

Application

EP 90402313 A 19900820

Priority

FR 8911492 A 19890901

Abstract (en)

[origin: CA2024380A1] 19 This antenna system has a plurality of elementary antennas configured into an array, wherein there is a reception (or transmission) channel associated with each antenna or sub-array of antennas, said reception channel having, in series: - an active reception module, - delay means capable of selectively introducing a pure delay of propagation of the signal picked up by the elementary antenna so as to produce a gradation of delays for the different respective elementary antennas, said gradation of delays enabling the definition of a desired pointing in the direction of the wave to be received with respect to the orientation proper to the array; - and an analog/digital converter receiving, at input, the analog signal received, to deliver, at output, a corresponding digitized signal to a beam forming computer. The delay means are digital means, positioned at output of the analog/digital converter and typically comprise a digitally programmable delay generator comprising a programming input that receives a digital control word, defining the delay to be produced, from a pointing computer, a triggering input that receives pulses digitally representing the signal to be delayed and a signal output delivering the delayed signal pulses. Figure 2

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