Title (en)
METHOD FOR GENERATING MUTUALLY ORTHOGONAL SIGNALS HAVING A CONTROLLED SPECTRUM

Title (de)
VERFAHREN ZUR ERZEUGUNG VON ZUEINANDER ORTHOGONALEN SIGNALEN MIT GESTEUERTER BANDBREITE

Title (fr)
PROCEDE DE GENERATION DE SIGNAUX MUTUELLEMENT ORTHOGONAUX DONT LE SPECTRE EST CONTROLE

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Application
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Abstract (en)
[origin: WO2008122744A1] The invention relates to a method for generating mutually orthogonal signals having a controlled spectrum, comprising the generation of a plurality of mututally orthogonal, controlled-power discrete spectra s(i) having dimension Q, i designating spectrum number. The aforementioned spectra represent time signals in the spectral range and have a modulus μ that is constant in a spectral line designation set G and zero everywhere else. The inventive method comprises the following steps: determining (20) at least part of a complex Hadamard matrix H of order dR = w in the case of spectra of real signals and $d_R = 2.w$ in the case of spectra of complex signals; determining (22) the extension P of matrix H from G and dimension Q; and obtaining (22) controlled-power spectra s(i) = μ.P(H[.][i]), wherein H[.][i] designates the i-th column of matrix H. In addition, a plurality of mutually orthogonal time signals s(i) is also generated from said discrete complex signals.

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