

Title (en)

Method and apparatus for generating a random signal with controlled histogram and spectrum

Title (de)

Verfahren und Vorrichtung zur Erzeugung eines Zufallssignals mit kontrolliertem Histogramm und Spektrum

Title (fr)

Procédé et dispositif de génération d'un signal aléatoire à histogramme et spectre contrôlés

Publication

**EP 1253512 B1 20050803 (FR)**

Application

**EP 02290060 A 20020110**

Priority

FR 0100541 A 20010116

Abstract (en)

[origin: US2002095449A1] A method and device for the generation of a random signal, comprising: A first step (a) for the generation of a pseudo-random signal, a second step (b) for the filtering (F1) of the signal coming from the step (a) to obtain a signal x(t) having a predetermined spectral envelope H(f), a third step (c) in which a non-linear function g is applied to the signal x(t) so as to form a signal y(t) and create overshoots on the edges of the histogram of the signal y(t), a fourth filtering (F2) step (d) used to smoothen the overshoots of the histogram of the signal y(t), compensate for the effect of the non-linearity and carry out an additional filtering at (F1). Application to a system of analog-digital conversion or digital-analog conversion.

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