

Title (en)  
METHOD AND DEVICE FOR ADDITIVE CODING OF SIGNALS IN ORDER TO IMPLEMENT DIGITAL MAC OPERATIONS WITH DYNAMIC PRECISION

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR ADDITIVEN CODIERUNG VON SIGNALEN ZUR DURCHFÜHRUNG DIGITALER MAC-OPERATIONEN MIT DYNAMISCHER GENAUIGKEIT

Title (fr)  
PROCEDE ET DISPOSITIF DE CODAGE ADDITIF DE SIGNAUX POUR IMPLEMENTER DES OPERATIONS MAC NUMERIQUES A PRECISION DYNAMIQUE

Publication  
**EP 4078817 A1 20221026 (FR)**

Application  
**EP 20819793 A 20201210**

Priority  
• FR 1914706 A 20191218  
• EP 2020085417 W 20201210

Abstract (en)  
[origin: WO2021122261A1] Method, implemented by computer, for coding a digital signal quantified on a given number  $N_d$  of bits and intended to be processed by a digital computing system, the signal being coded on a predetermined number  $N_p$  of bits that is strictly smaller than  $N_d$ , the method comprising the steps of: - receiving (101) a digital signal composed of a plurality of samples; - decomposing (102) each sample into a sum of  $k$  maximum values that are equal to  $2^{N_p-1}$  and a residual value, with  $k$  a positive or zero integer; - successively transmitting (103) the values obtained after decomposition to an integration unit in order to perform a MAC operation between the sample and a weighting coefficient.

IPC 8 full level  
**H03M 7/04** (2006.01); **G06F 17/16** (2006.01); **H03M 7/28** (2006.01)

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**G06F 7/5443** (2013.01 - EP US); **G06N 3/048** (2023.01 - EP); **G06N 3/063** (2013.01 - EP); **G06N 3/084** (2013.01 - EP US); **H03M 7/04** (2013.01 - EP); **H03M 7/28** (2013.01 - EP)

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Designated extension state (EPC)  
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**FR 3105660 A1 20210625**; **FR 3105660 B1 20221014**; EP 4078817 A1 20221026; US 2023004351 A1 20230105; WO 2021122261 A1 20210624

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