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(54) **Title:** METHOD AND APPARATUS FOR ANALOG-TO-DIGITAL CONVERSION USING ASYNCHRONOUS SIGMA-DELTA MODULATION

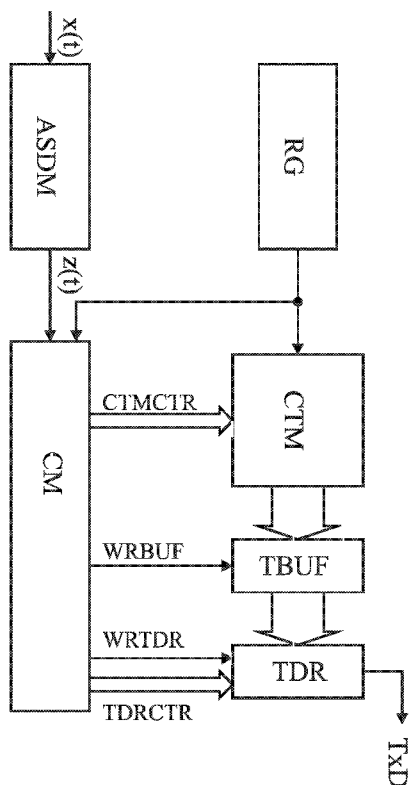


Fig. 1

(57) **Abstract:** The solution according to the invention consisting in the modulation of the analog signal using the asynchronous Sigma-Delta modulator, counting periods of the reference clock during each pulse of the previously obtained square wave and making the digital word available is characterized in that the square wave ($z(t)$) obtained in result of the modulation in the asynchronous Sigma-Delta modulator (ASDM) is subjected to conversion by counting the periods (T_0) of the reference clock (RG) during subsequent pulses of that square wave ($z(t)$) by means of the counting module (CTM), and then each word obtained representing the number of periods (T_0) of the reference clock (RG) counted during each given pulse of the square wave ($z(t)$) is recorded and stored in the intermediate buffer (TBUF); and the duration of the serial transmission of the digital word obtained in result of counting the periods of the reference clock (RG) during previous pulse of the square wave ($z(t)$) is simultaneously controlled by the control module (CM); and as soon as this transmission is completed, the content of the intermediate buffer (TBUF) is transferred to the transmitting buffer (TDR) of the apparatus; and after that a given digital word representing a given pulse of the square wave ($z(t)$) is transmitted serially to the computer or to the communication network; then the cycle is repeated for the next pulse of the square wave ($z(t)$).

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal , WPI Data, COMPENDEX, INSPEC, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/190865 A1 (LAZAR AUREL A [US] ET AL) 1 September 2005 (2005-09-01) cited in the application paragraphs [0032], [0049]; figures 1,2,4 -----	1-9

D Further documents are listed in the continuation of Box C.

See patent family annex.

Special categories of cited documents :

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