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— *as to the identity of the inventor (Rule 4.17(i))*

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[Continued on next page]

(54) Title: A SYSTEM FOR ACQUISITION OF TOMOGRAPHIC MEASUREMENT DATA

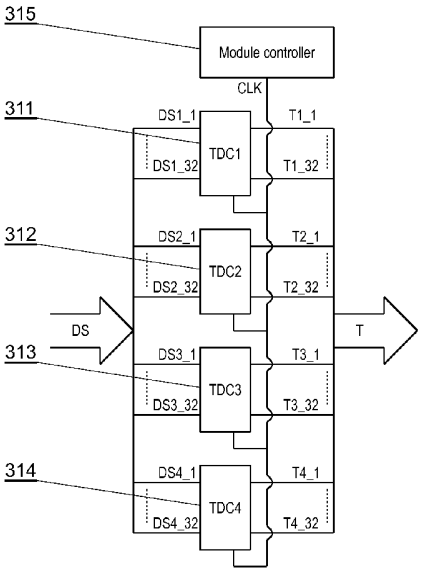

Fig. 3

(57) Abstract: A system for acquisition of tomographic measurement data from measurement signals (S) of positron emission tomography (PET) or single-photon emission computed tomography (SPECT) detectors, the system comprising: a front-end electronic assembly (2) configured to convert the measurement signals (S) into digital and analog signals (DAS); a measurement electronics assembly (3) comprising time to digital converter (TDC) modules (31) configured to determine times (T) of pulses in digital signals (DS). The measurement electronics assembly (30) comprises: a series (TDCa-TDCd) of TDC modules (31), each module comprising a series (TDC1-TDC4) of TDC circuits (311 -314); a module controller (315) configured to transmit a clock signal (CLK), input to the module controller (315) from a system controller (40), to each of the TDC circuits (311-314); wherein each of the TDC circuits (311-314) is configured to execute measurements in a measurement window delimited by the neighboring edges of the clock signal (CLK) which is common for all TDC circuits (311-314).

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