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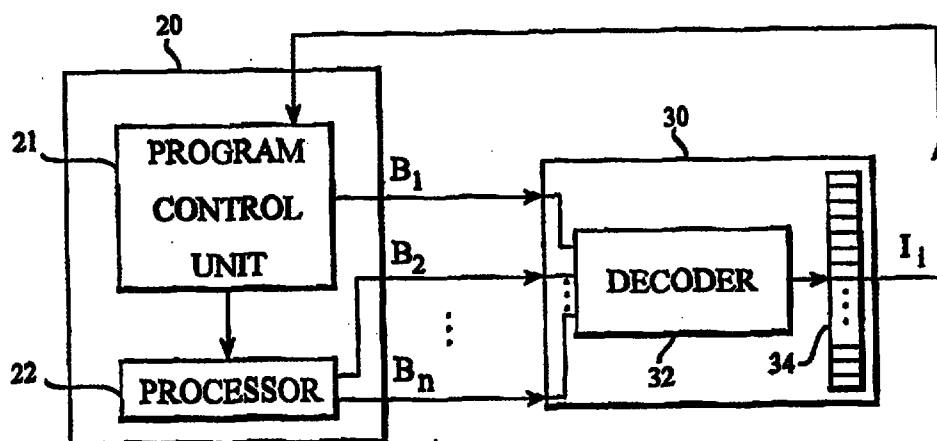
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(54) Title: DIGITAL CIRCUIT USING MEMORY FOR MONITORING SIGNALS FOR OCCURRENCES OF PREDEFINED BREAK-POINT CONDITIONS



(57) Abstract

A breakpoint unit contains a memory circuit (30, 50) which monitors digital signals ($B_1, \dots, B_n, C_1, \dots, C_m$) for the occurrence of any of a plurality of predetermined conditions. The memory circuit includes an array of memory cells (34, 53) (each cell storing data ($I_i; K_{im}$) determining a value of a breakpoint condition of interest), and selected ones of the cells can be read in response to various combinations of the signal bits. The accessed data value is used as a breakpoint signal that halts or initiates operation of the circuit (20) originating the signals being monitored. An alternative embodiment may have multiple memory circuits (41, 42; 60, 61) monitoring distinct sets of signal bits for different conditions of interest, and the corresponding accessed data values may be combined by logic gates (43) or used as inputs to a second-stage memory circuit (62) to generate the breakpoint signal ($K_{ij}; L_m$).