

Device for solving problem on maximal independent set of graph relates to computer engineering and can be used in engineering, economy, at planning radio networks, setting routes, designing large integrated circuits. Main point of the invention is in fact that the device includes generator of timing pulses, counter, decoder, matrix of cells for formation of topology of the graph under investigation each cell of which consists of trigger and element AND first input of which is connected to the output of the trigger, group of elements OR by number of columns of matrix of cells of formation of topology of the graph being studied, two-bit counter, group of elements AND by number of columns of matrix of cells for formation of topology of the graph being studied, element OR-NOT, registration block is arranged as registration massif of cells of independent set by number of columns of matrix of formation of topology of the graph being studied, its each cell consists of element NOT, two elements AND, and trigger zero and unit outputs of which are connected to outputs of the first and the second elements AND, respectively, and output of the element NOT is connected to the first input of the first element AND. Technical result is in provision of search of maximal independent set.