(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :08/02/2023

(21) Application No.202341008225 A
(43) Publication Date : 24/02/2023

(54) Title of the invention : VLSI LAYOUT USING REDUNDANT NODES TO INCREASE THE RELIABILITY

(51) International classification :G06F0030394000, G01C0021340000, G06F0030390000, H04L0045280000, G05B0009030000
(86) International Application No :PCT// Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA Filing Date :NA
(62) Divisional to Application Number :NA Filing Date :NA

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(57) Abstract :
[030] The present invention particularly relates to the VLSI layout using redundant nodes to increase the reliability. The invention provides a method for locating a single via in a first path connecting two elements, deciding whether an alternative route (other than a redundant via) is available for connecting the two elements, and inserting a second path into the available alternate route. More redundancy is offered by combining the first and second pathways than by only inserting a redundant via. More crucially, such redundant pathways offer redundancy in cases where congestion makes it impossible to put a redundant through next to the single via. If all of the extra vias utilised to create the second way can be declared redundant, one embodiment of the process additionally entails deleting the single through and any unnecessary wire segments. Accompanied Drawing [FIG. 1]

No. of Pages : 21 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :28/08/2022

(21) Application No.202241049042 A
(43) Publication Date : 16/09/2022

(54) Title of the invention : DETECTION OF DEFECTS IN TEXTILE FABRICS USING WEAVE PATTERN RECOGNITION AND CLASSIFICATION BASED ON MACHINE LEARNING TECHNIQUE

(51) International classification :G06K0009620000, G06T0007000000, G06K0009000000, G01N0033360000, G01N0021898000
(86) International Application No :PCT//
Filing Date :01/01/1900
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In this present modern and fashionable era, textile is the most significant aspect. The life without textile is unimaginable. The main important issue faced by the textile manufacturing industry is the fabric quality control. If the quality of the fabric is not in the desired level, then the industry will lose its business in the most competitive sector. The defects in the textile fabrics can be of any kind like holes, oil strains and so on. Hence, there is a need of automatic system or approach that detects the defects in the fabric. The proposed approach provides a technique that can be used to detect the defects in the textile fabrics automatically and rapidly. The proposed approach involves the important steps such as acquisition of images, pre-processing, improvisation of image quality, feature extraction and standard division. The textile fabric images are captured using the high-definition camera and acquired for comparing it with the datasets which are collected earlier. In the pre-processing step, the acquired images are converted to grayscale which is helpful to analyse the acquired images easily. In the improvisation of image quality step, the unwanted noises are removed from the gray-scaled images.In the feature extraction step, the gray level co-occurrence matrix method is used to extract features like correlation, autocorrelation, entropy, dissimilarity, contrast, brightness, cluster shade, energy, contrast inverse difference, homogeneity, sum of square, maximum probability, mean and wide sense stationary. In the final step, discrete cosine transform is used to compare the acquired images with the datasets. Finally, to identify the defective fabric from the normal fabric, the neural network classifier is used along with defect localization, pattern recognition and classification.The proposed approach exhibits more efficiency than the conventional approaches. The efficiency of the proposed approach is determined based on the parameters such as image acquisition speed, pre-processing durability, code effectiveness, iteration computations, execution time, comparative delay. From the comparative results, it is evident that the proposed approach is highly recommendable for the detection of defects in the textile fabrics and also easy to install in the textile manufacturing industries with less installation cost.

No. of Pages : 13 No. of Claims : 7