Restoration of Digital Design Using Row and Column Major Parsing Technique from the Old/Used Jacquard Punched Cards

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Abstract : The optimized and digitalized restoration of the information from the old and used manual jacquard punched card in textile industry is referred to as Jacquard Punch Card (JPC) reader. In this paper, we present a novel design and development of photo electronics based system for reading old and used punched cards and storing its binary information for transforming them into an effective image file format. In our textile industry the jacquard punched cards holes diameters having the sizes of 3mm, 5mm and 5.5mm pitch. Before the adaptation of computing systems in the field of textile industry those punched cards were prepared manually without digital design source, but those punched cards are having rich woven designs. Now, the idea is to retrieve binary information from the jacquard punched cards and store them in digital (Non-Graphics) format before processing it. After processing the digital format (Non-Graphics) it is converted into an effective image file format through either by Row major or Column major parsing technique.To accomplish these activities, an embedded system based device and software integration is developed. As part of the test and trial activity the device was tested and installed for industrial service at Weavers Service Centre, Kanchipuram, Tamilnadu in India.

Keywords : file system, SPI. UART, ARM controller, jacquard, punched card, photo LED, photo diode
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