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ANALYSIS OF PROCESSES OF IMAGE REPRODUCTION
FOR SYSTEMS OF ELEMENTWISE DATA OUTPUT

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Methods of reproduction of digital images are of great interest to various branches, including modern printing. The essential feature for printing product is its quality, which is determined by many factors. The lack of universal quality criteria is a source of constant search of new adequate solutions. Digital images for print output are processed by Raster Image Processor (RIP), which is hardware and software system that fulfils digital screening procedure. Transformation of illustrative information into the bit map (image binarization) is understood in printing, which controls the printing mechanism.

On the basis of system analysis of relationships between various factors in RIP scanning the cause-and-effect diagram is built, which allows to study the scanning process in detail. The interpreter is specified to be the most important module of PostScript-RIP that transfers all language commands of page description into the display list, thanks to this all objects of the list are brought into conformity with the resolution output device.

The analysis of methods used in the printing process for pre-processing a stream of digital data in PostScript format in raster image processor systems (RIP), including combined PDF / PostScript conversion was carried out. It is shown that as the PostScript format is hardware-independent, so thanks to the approaches based on the work of the interpreter and contour descriptions of data structures, PostScript file is the most appropriate for output in different types of output devices using their highest possible resolution.