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(54) Title: METHOD AND APPARATUS FOR SELECTIVE PROCESSING OF CAPTURED IMAGES

SCANNER 10

Provide a digital imaging scanner having a light source and sensor for detecting light reflected off the sheet.

FILTER 20

Provide a color filter in the color of the key marks and response targets.

FILTER 30

Arrange filter in relation to the sheet as it passes through the scanner so that light reflected from the section containing key marks is not filtered and light reflected from the response targets is filtered.

SHEET 40

Scan the sheet with a digital imaging scanner.

PIXEL DARKNESS VALUES 50

Use gray scale values to locate key marks in the captured image.

KEY MARKS 60

Calculate, from the location of the key marks in the image, an expected location of response targets in the image.

RESPONSE MARKS 70

Use gray scale values to identify an intended response mark at the expected location of a target.

(57) Abstract: Methods and apparatus are disclosed for identifying intended response marks in an optically scanned image of a response sheet having key marks and response targets printed in the same color. Pixel darkness values assigned by a digital imaging scanner (10) are used to locate key marks and response targets and to identify response marks (60). Areas of the sheet may be selectively filtered to mask the response targets (20). Alternatively, a color imaging scanner may be used to produce a set of color values, such as RBG values, for each pixel.



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US CL : 382/282, 287, 312, 321

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,452,379 A (POOR) 19 September 1995, Col. 4, lines 20-65.	1-10
Y	US 5,672,060 A (POOR) 30 September 1997, Col. 3, lines 6-60.	1-10

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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"O" document referring to an oral disclosure, use, exhibition or other means		
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