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(54) **IMAGE PROCESSING APPARATUS, IMAGE PROCESSING METHOD, AND COMPUTER PROGRAM**

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(57) **ABSTRACT**

An apparatus and a method for efficiently executing correction of false color, such as purple fringe, caused by chromatic aberration and for generating and outputting high-quality image data are provided. A white-saturated pixel is detected from image data, a false-color-pixel detection area is set around the detected white-saturated pixel, and pixels having color corresponding to false color such as purple fringe are detected from the set area. The detected pixels are determined as false-color pixels and correction processing based on the values of the surrounding pixels is performed on the determined false-color pixels. With this configuration, an area of false color such as purple fringe generated in the neighborhood of a white-saturated pixel can be efficiently detected, pixel values can be partially corrected, and high-quality image data can be generated and output without affecting the entire image.

Align Ex. 1008

FIG. 1

FIG. 2
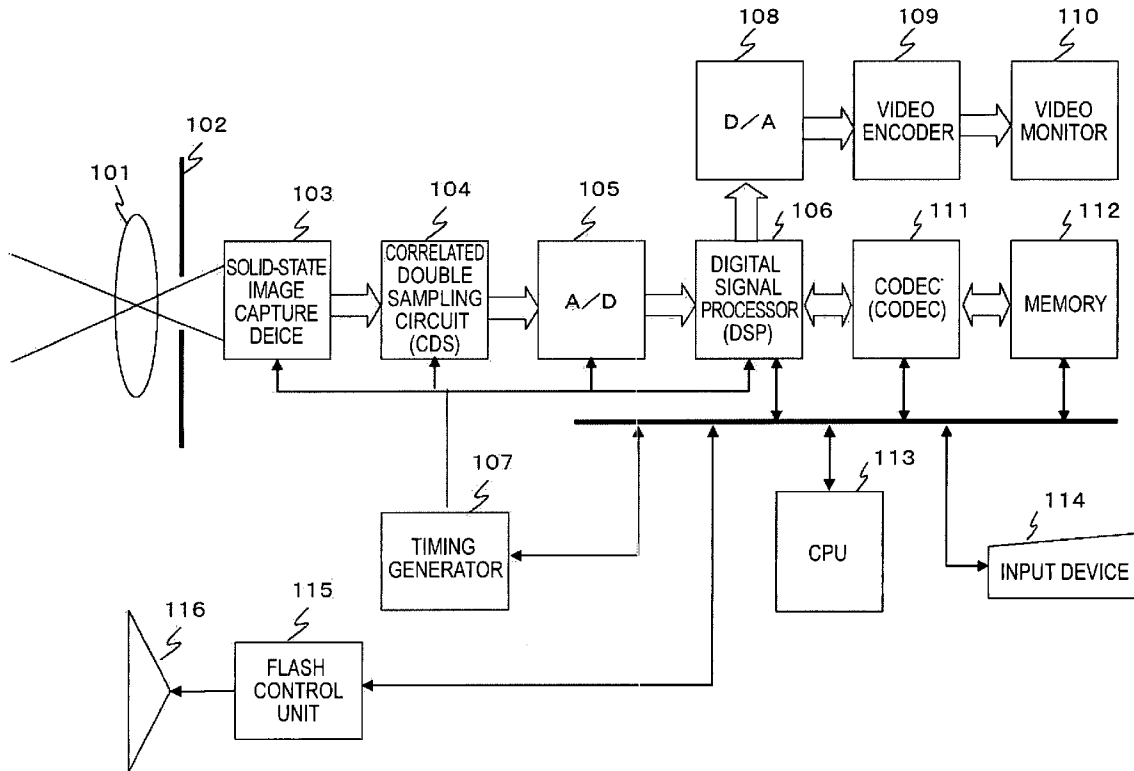
START

S101
COLOR-SPACE CONVERSION PROCESSING

S102
WHITE-SATURATED AREA DETECTION PROCESSING
(WHITE-SATURATION MASK DETERMINATION)

S103
FALSE-COLOR-PIXEL DETECTION-AREA
SETTING PROCESSING (DILATE PROCESSING)

S104
FALSE-COLOR PIXEL DETECTION PROCESSING

S105
FALSE-COLOR PIXEL CORRECTION PROCESSING

S106
COLOR BLUR PROCESSING
(FILTERING)

S107
COLOR-SPACE INVERSE-CONVERSION
PROCESSING

END

FIG. 3

FIG. 4

START

S201

y=0

S202

x=0

S203

LUMINANCE > THRESHOLD?

No

Yes

S204

S(x, y)=true

S205

S(x, y)=false

S206

x=x+1

S207

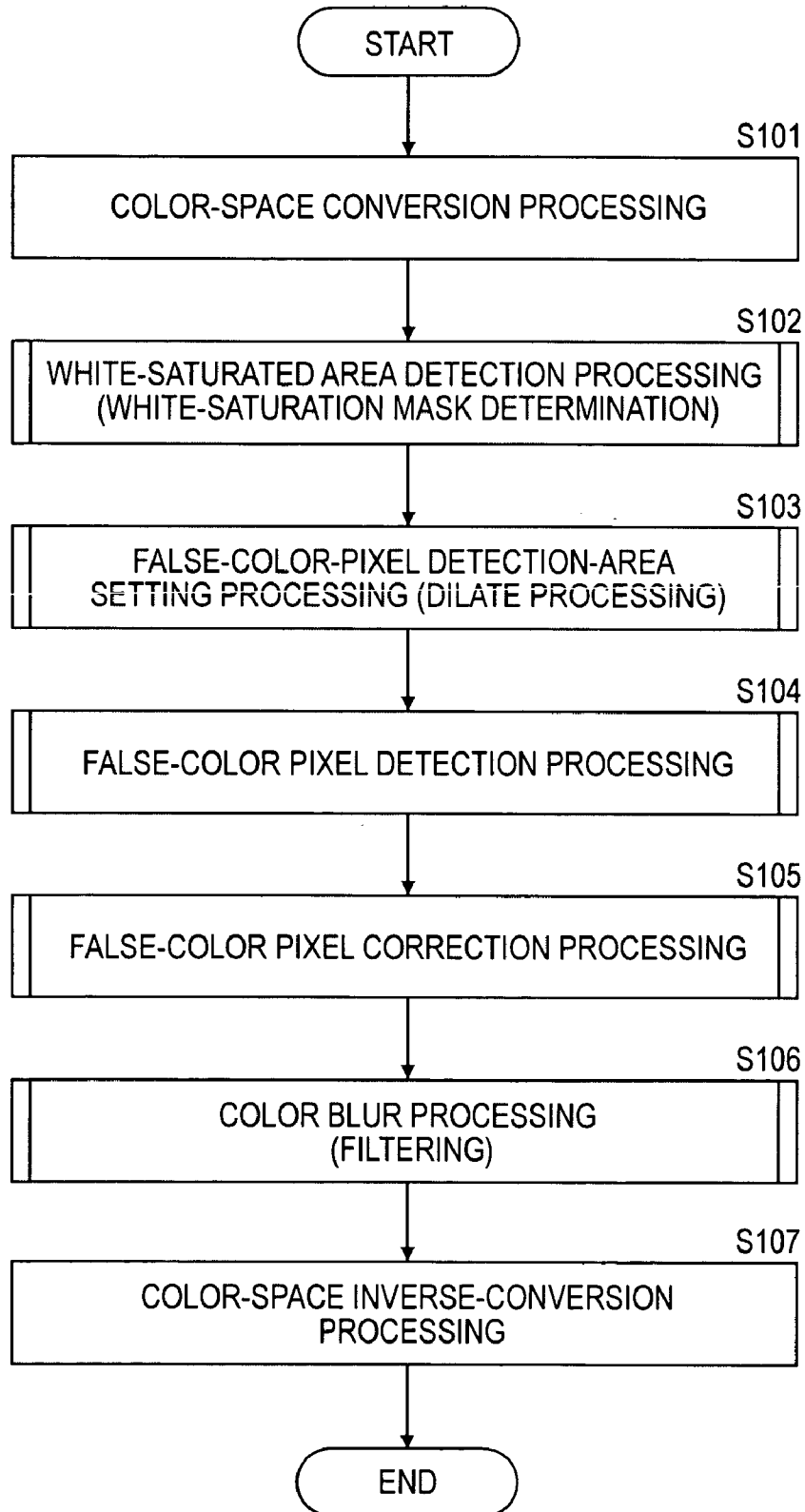x>w−1?

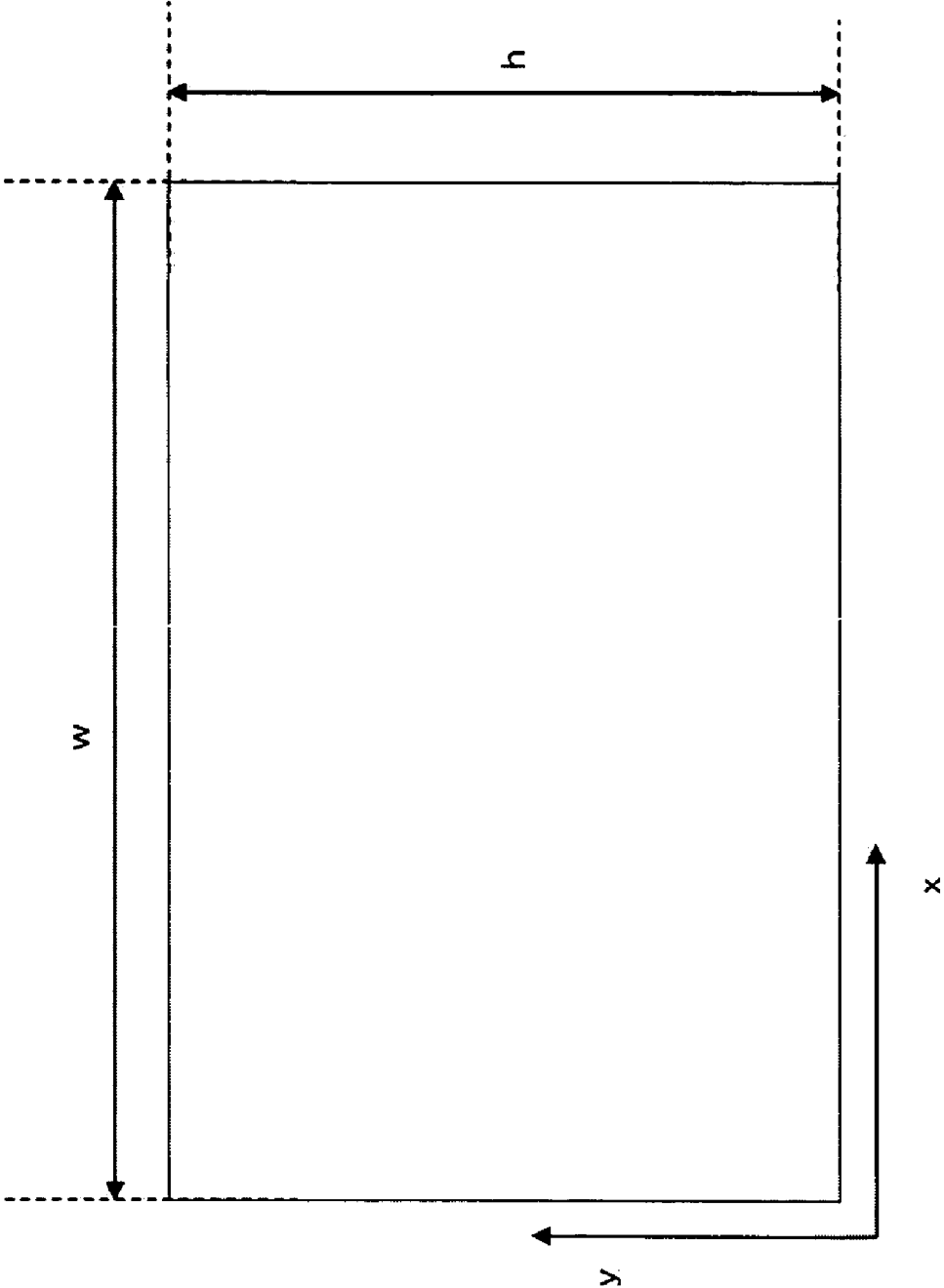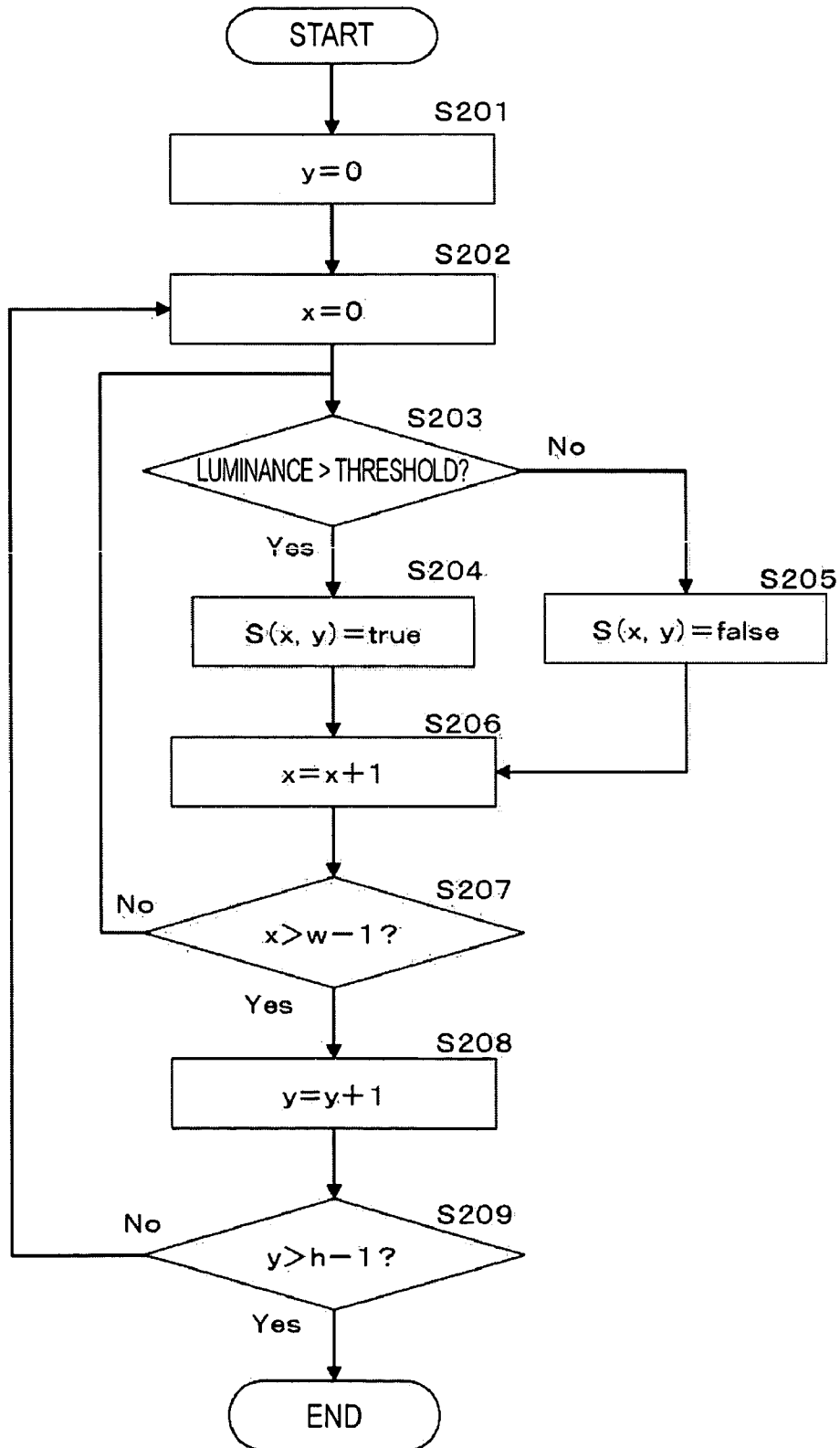No

Yes

S208

y=y+1

S209

y>h−1?

No

Yes

END
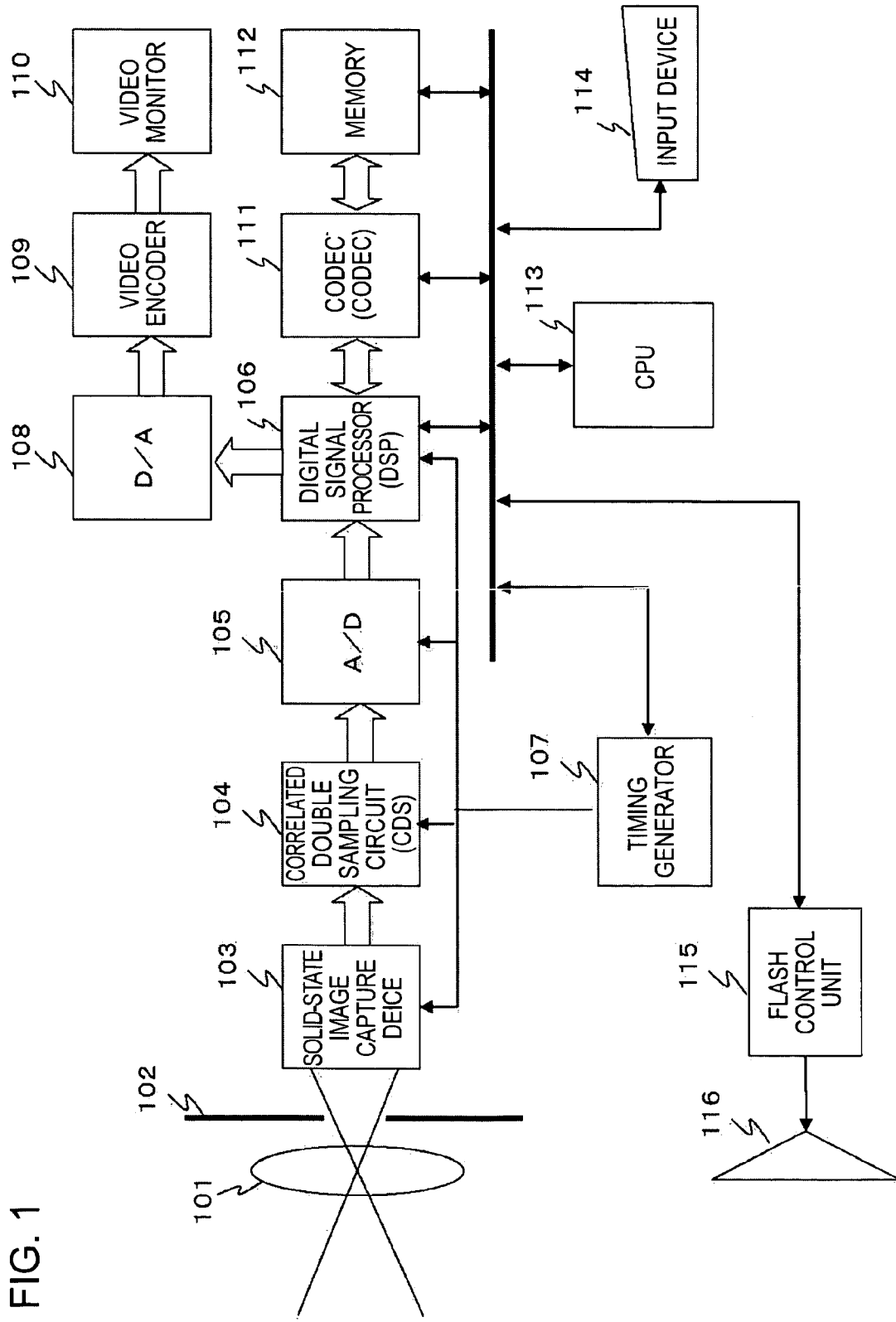
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