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(54) **SMART IMAGE SENSOR HAVING INTEGRATED MEMORY AND PROCESSOR**

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(57)   **ABSTRACT**

An apparatus is described. The apparatus includes a smart image sensor having a memory and a processor that are locally integrated with an image sensor. The memory is to store first program code to be executed by the processor. The memory is coupled to the image sensor and the processor. The memory is to store second program code to be executed by the processor. The first program code is to cause the smart image sensor to perform an analysis on one or more images captured by the image sensor. The analysis identifies a region of interest within the one or more images with machine learning from previously captured images. The second program code is to cause the smart image sensor to change an image sensing and/or optical parameter in response to the analysis of the one or more images performed by the execution of the first program code. Alternatively or in combination, the memory is to store third program code to be executed by the processor and fourth program code to be executed by the processor. The third
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