United States Patent [19]

Hunke

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[54] **TARGET ACQUISITION AND TRACKING**

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[51] **Int. Cl.**[6] **G06K 9/62**; G06T 7/20
[52] **U.S. Cl.** **382/103**; 382/165; 348/169
[58] **Field of Search** 382/103, 164, 382/165, 169, 236; 348/169, 170, 171, 172, 416

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[57] **ABSTRACT**

A method for automatically locating a predetermined target class of objects in a video image stream, comprising the steps of determining typical colors found in objects of the predetermined target class, detecting a moving area in the video image stream, determining the colors in the moving area, and determining whether the moving area contains colors similar to the predetermined target class typical colors. Additionally the method allows tracking of such located target objects in subsequent frames of the video image stream based upon the colors in the target objects.
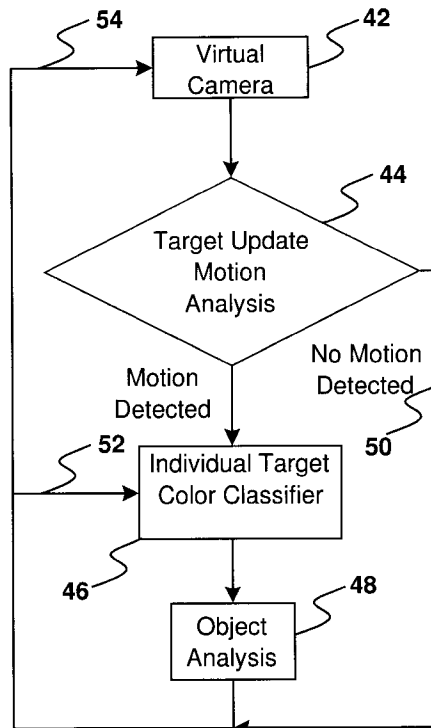
13 Claims, 5 Drawing Sheets

Fig. 1

Disable Regions
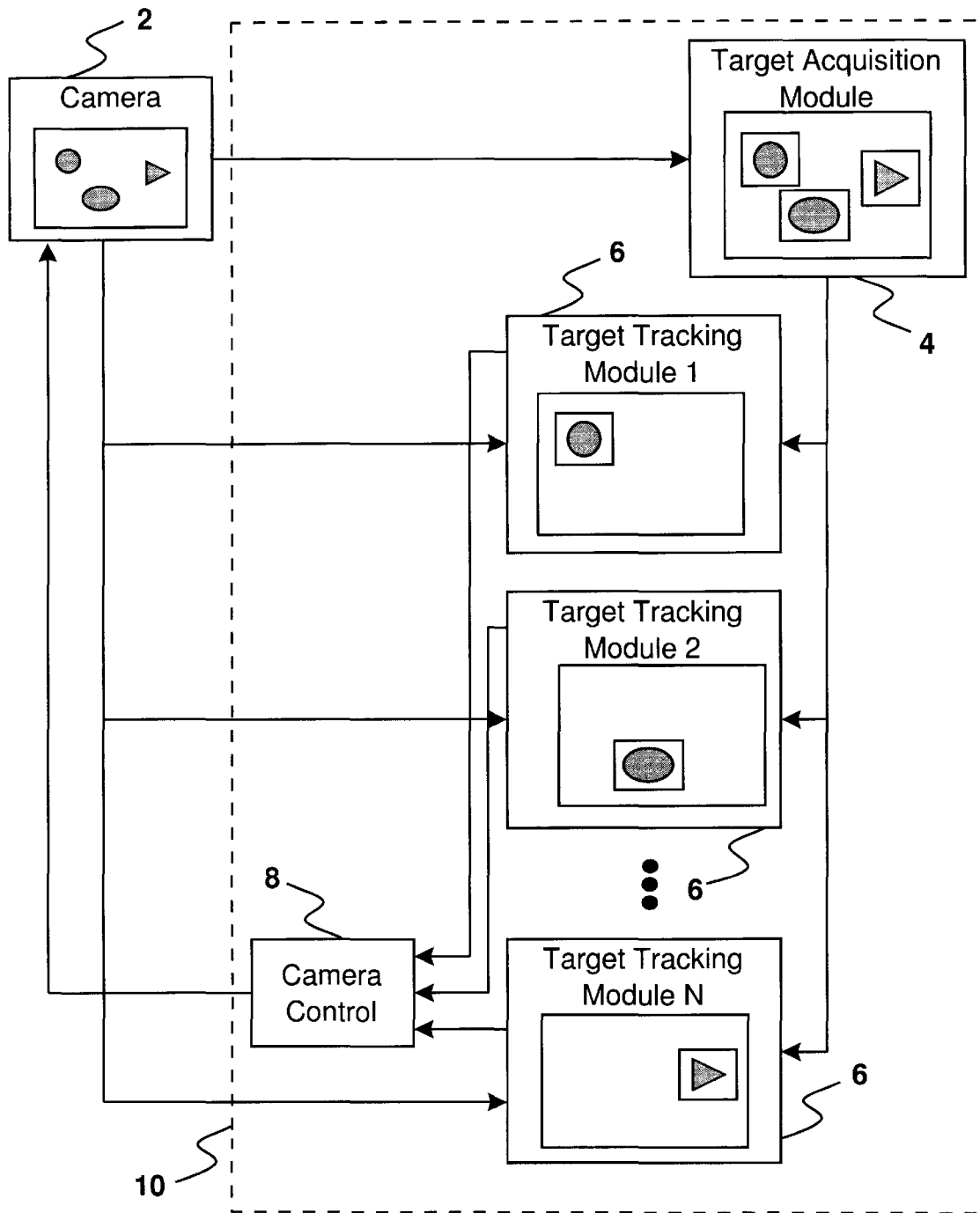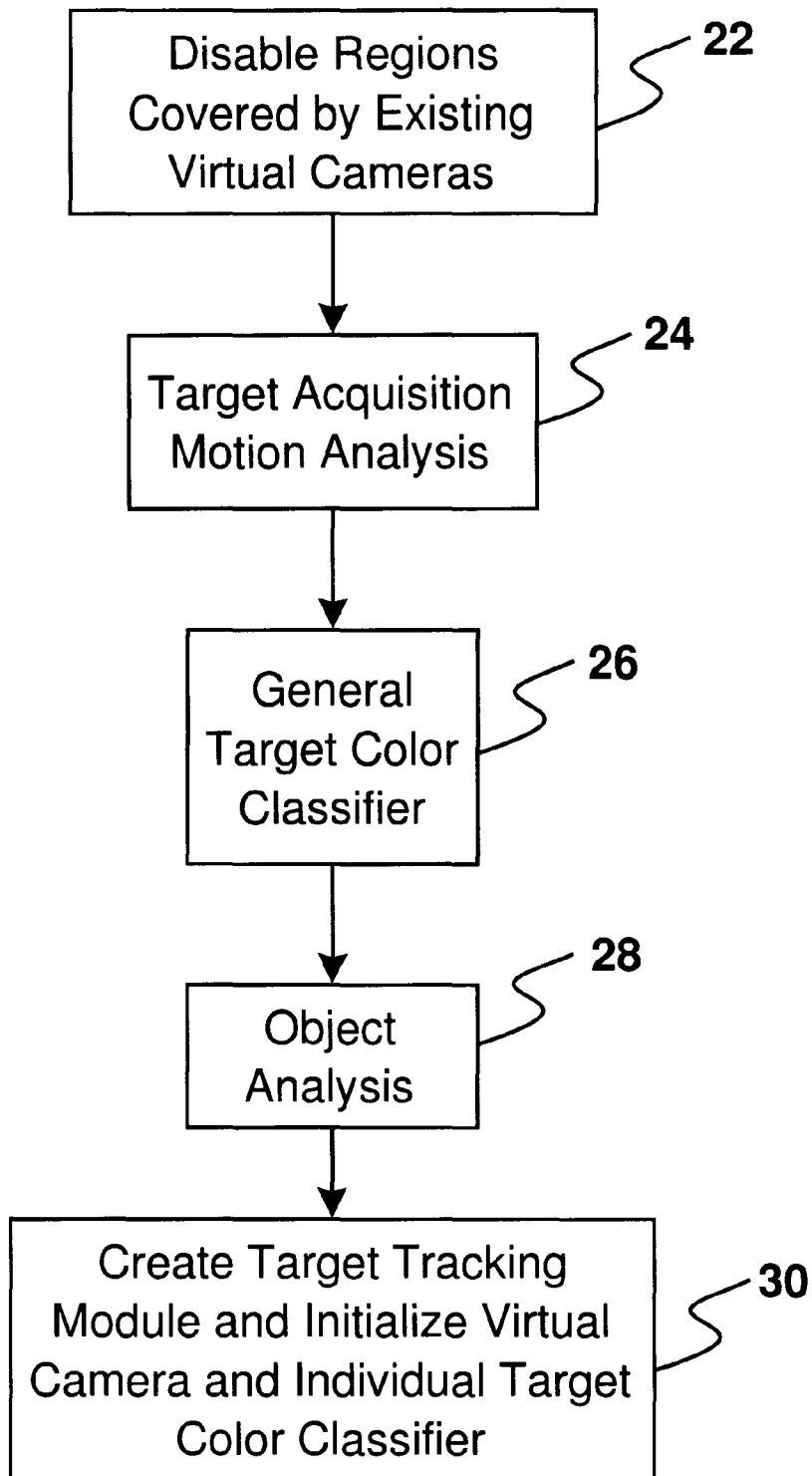Covered by Existing
Virtual Cameras   **22**

Target Acquisition
Motion Analysis   **24**

General
Target Color
Classifier   **26**

Object
Analysis   **28**

Create Target Tracking
Module and Initialize Virtual
Camera and Individual Target
Color Classifier   **30**

Fig. 2

54

42

Virtual
Camera

44

Target Update
Motion
Analysis

No Motion
Detected

Motion
Detected

50

52

Individual Target
Color Classifier

46

48

Object
Analysis

Fig. 3

Fig. 4

Fig. 5

DOCKET ALARM
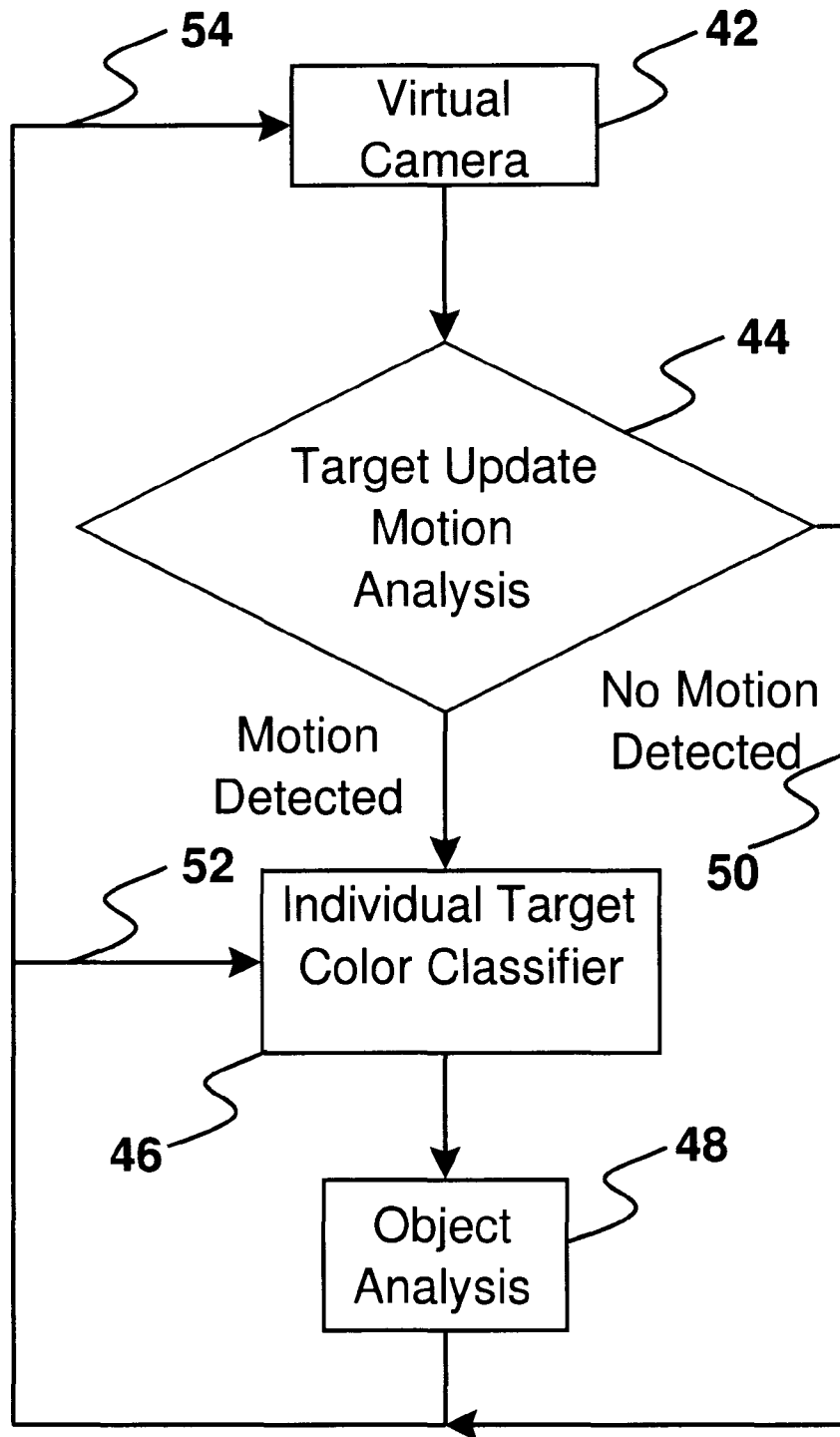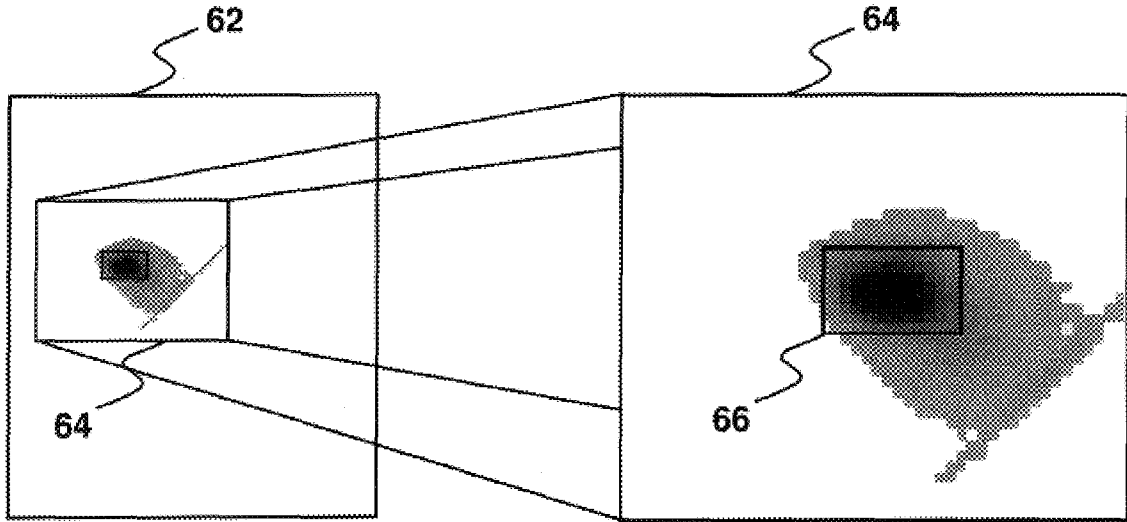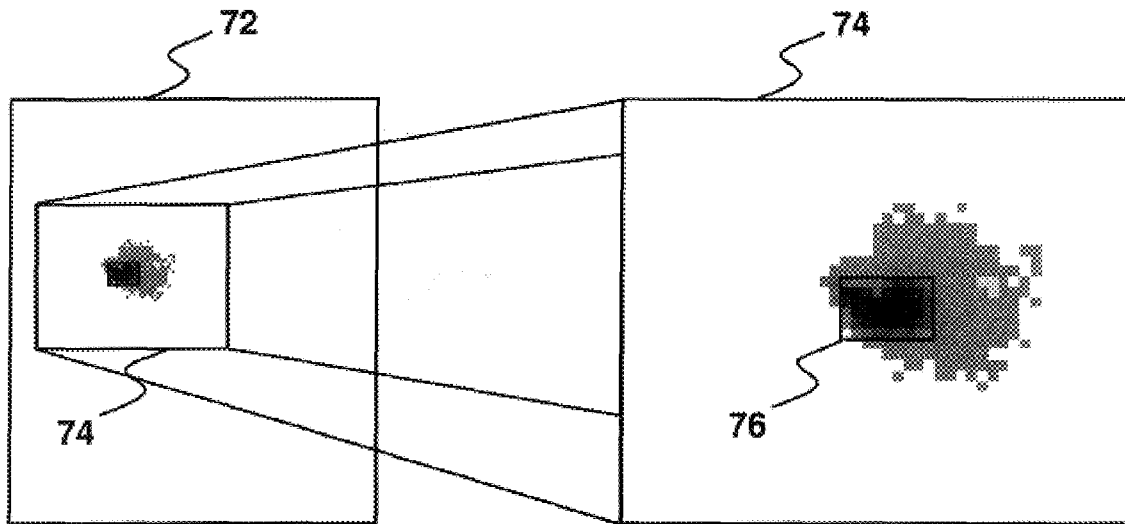
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