CLAIMS

~~WHAT IS CLAIMED IS:~~

1. ~~_____~~ A method of processing one or more images, the method comprising:

~~determining~~ one or more current exposure settings for a current image of a current scene at a current time;

processing the current image using the one or more current exposure settings;

determining, during travel of an apparatus to a destination, one or more motion characteristics associated with an image sensor of the apparatus;

~~predicting~~detecting an object in a first portion of the current image, the object being associated with a route of travel of the apparatus to the destination, the object associated with the route of travel and the one or more motion characteristics being different;

determining, based on the one or more motion characteristics~~, a location of a~~ and the object associated with the route of travel of the apparatus to the destination, a second portion of the current image to use for determining one or more future exposure settings for the image sensor, the one or more future exposure settings for capturing a future image of a future scene at a future time, the future time being subsequent to the current time; and

~~determining~~ the one or more future exposure settings based on the ~~predicted~~determined second portion of the current image.

2. ~~-~~ The method of claim 1, further comprising:

~~determining~~ the one or more future exposure settings before a field of view of the image sensor reaches the future scene.

3. The method of claim 1, ~~wherein predicting~~further comprising identifying the ~~location of the~~second portion of the current image to use for determining the one or more future exposure settings comprises excluding a region of the current image from being used for determining the one or more future exposure settings.

4. ~~_____~~ The method of claim 1, wherein the one or more motion characteristics comprise one or more of a speed or a direction of travel of the image sensor.

5.- The method of claim 4, further comprising:

determining the one or more motion characteristics based at least in part on one or more of an inertial sensor or input to a steering system in communication with the image sensor.

6. ~~The method of claim 4, further comprising:~~

~~determining the one or more motion characteristics based at least in part on one or more regions of interest of the current image.~~

~~7.~~ The method of claim 1, wherein determining the one or more future exposure settings based on the ~~predicted~~determined second portion of the current image comprises:

~~predicting~~determining one or more regions of interest of the future image in the ~~predicted~~determined second portion; and

adjusting exposure settings for the one or more regions of interest.

~~8.~~ 7. The method of claim 1, further comprising:

determining a grid comprising one or more grid elements associated with one or more regions of the future image in the ~~predicted~~determined second portion; and

determining weights for the one or more grid elements, wherein the one or more future exposure settings are based on the weights.

~~9.~~ 8. The method of claim 1, wherein the ~~-~~ one or more future exposure settings include a variation in one or more current exposure settings of the current image.

~~10.~~ 9. The method of claim 1, further comprising:

capturing the future image by the image sensor, based on the one or more future exposure settings.

~~11.~~ 10. An apparatus for processing one or more images, the apparatus comprising:

~~-~~a memory configured to store the one or more images; and

~~-~~~~a~~at least one processor implemented in circuitry and configured to:

———determine one or more current exposure settings for a current image of a current scene at a current time;

process the current image using the one or more current exposure settings;

determine, during travel of an apparatus to a destination, one or more motion characteristics associated with an image sensor of the apparatus;

———predictdetect an object in a first portion of the current image, the object being associated with a route of travel of the apparatus to the destination, the object associated with the route of travel and the one or more motion characteristics being different;

determine, based on the one or more motion characteristics, a location of a and the object associated with the route of travel of the apparatus to the destination, a second portion of the current image to use for determining one or more future exposure settings for the image sensor, the one or more future exposure settings for capturing a future image of a future scene at a future time, the future time being subsequent to the current time; and

———determine the one or more future exposure settings based on the predicteddetermined second portion of the current image.

12. 11. The apparatus of claim 1110, wherein the at least one processor is further configured to:

———determine the one or more future exposure settings before a field of view of the image sensor reaches the future scene.

1312. The apparatus of claim 1110, wherein predicting the location of the portion of the current image to use for determining theat least one or more future exposure settings comprises excludingprocessor is further configured to exclude a region of the current image from being used for determiningdetermination of the one or more future exposure settings.

14. ——13. The apparatus of claim 1110, wherein the one or more motion characteristics comprise one or more of a speed or a direction of travel of the image sensor.

15. 14. The apparatus of claim 1110, wherein the at least one processor is further configured to:

determine the one or more motion characteristics based at least in part on one or more of an inertial sensor or input to a steering system in communication with the image sensor.

16. 15. The apparatus of claim 11 10, wherein the at least one processor is further configured to:

determine the one or more motion characteristics based at least in part on one or more regions of interest of the current image. future image in the determined second portion; and

17. The apparatus of claim 11, wherein determining the one or more future exposure settings based on the predicted portion of the current image comprises:

predicting one or more regions of interest of the future image in the predicted portion; and

adjustingadjust exposure settings for the one or more regions of interest.

18. 16. The apparatus of claim 11 10, wherein the at least one processor is further configured to:

determine a grid comprising one or more grid elements associated with one or more regions of the future image in the predicteddetermined second portion; and

determine weights for the one or more grid elements, wherein the one or more future exposure settings are based on the weights.

19. 17. The apparatus of claim 11 10, wherein the one or more future exposure settings include a variation in one or more current exposure settings of the current image.

20. 18. The apparatus of claim 11 10, wherein the at least one processor is further configured to:

capture the future image by the image sensor, based on the one or more future exposure settings.

21 19. The apparatus of claim 11 10, further comprising a camera for capturing one or more images.

22 20. The apparatus of claim 11 10, wherein the apparatus comprises a mobile device with a camera for capturing one or more images. or a vehicle with a camera for capturing one or more

images.

~~23.~~ 21. The apparatus of claim ~~11~~10, further comprising a display for displaying one or more images.

~~24.~~ 22. A non-transitory computer-readable medium having stored thereon instructions that, when executed by one or more processors, cause the one or more processors to:

~~———~~determine one or more current exposure settings for a current image of a current scene at a current time;

~~———~~process the current image using the one or more current exposure settings;

determine, during travel of an apparatus to a destination, one or more motion characteristics associated with an image sensor of the apparatus;

~~———predict~~detect an object in a first portion of the current image, the object being associated with a route of travel of the apparatus to the destination, the object associated with the route of travel and the one or more motion characteristics being different;

determine, based on the one or more motion characteristics~~, a location of a~~ and the object associated with the route of travel of the apparatus to the destination, a second portion of the current image to use for determining one or more future exposure settings for the image sensor, the one or more future exposure settings for capturing a future image of a future scene at a future time, the future time being subsequent to the current time; and

~~———~~determine the one or more future exposure settings based on the ~~predicted~~determined second portion of the current image.

~~25.~~ 23. The non-transitory computer-readable medium of claim ~~24~~22, further comprising instructions that, when executed by the one or more processors, cause the one or more processor to:~~——~~

~~———~~determine the one or more future exposure settings before a field of view of the image sensor reaches the future scene.

~~26.~~ ~~——~~24. The non-transitory computer-readable medium of claim ~~24~~22, wherein ~~predicting~~determining the ~~location of the~~second portion of the current image to use for

determining the one or more future exposure settings comprises excluding a region of the current image from being used for determining the one or more future exposure settings.

~~27.~~ 25. The non-transitory computer-readable medium of claim ~~24~~22, further comprising instructions that, when executed by the one or more processors, cause the one or more processor to:

~~———~~determine the one or more motion characteristics based at least in part on one or more of an inertial sensor or input to a steering system in communication with the image sensor.

~~28.~~ 26. The non-transitory computer-readable medium of claim ~~24~~22, further comprising instructions that, when executed by the one or more processors, cause the one or more processor to:

~~———~~determine the one or more motion characteristics based at least in part on input to a steering system in communication with the image sensor.

~~29.~~ 27. An apparatus for processing one or more images, the apparatus comprising:

~~———~~means for determining one or more current exposure settings for a current image of a current scene at a current time;

means for processing the current image using the one or more current exposure settings;

means for determining, during travel of an apparatus to a destination, one or more motion characteristics associated with an image sensor of the apparatus;

~~———means for predicting~~means for detecting an object in a first portion of the current image, the object being associated with a route of travel of the apparatus to the destination, the object associated with the route of travel and the one or more motion characteristics being different;

means for determining, based on the one or more motion characteristics~~, a location of a~~ and the object associated with the route of travel of the apparatus to the destination, a second portion of the current image to use for determining one or more future exposure settings for the image sensor, the one or more future exposure settings for capturing a future image of a future scene at a future time, the future time being subsequent to the current time; and

~~———~~means for determining the one or more future exposure settings based on the

~~predicted~~determined second portion of the current image.

~~30.~~ 28. The apparatus of claim ~~29~~27, wherein ~~predicting~~ the ~~location of~~means for determining the second portion of the current image to use for determining the one or more future exposure settings comprises means for excluding a region of the current image from being used for determining the one or more future exposure settings.

29. The method of claim 1, further comprising predicting a location of the second portion of the current image based on the one or more motion characteristics of the image sensor.

30. The apparatus of claim 10, wherein the at least one processor is further configured to predict a location of the second portion of the current image based on the one or more motion characteristics of the image sensor.

31. The method of claim 1, wherein the object associated with a route of travel includes at least one indicium indicative of at least one characteristic of a road associated with the route of travel.

32. The method of claim 1, further comprising:

detecting the object based on utilization of a graphics processing unit.

33. The method of claim 1, further comprising determining a location of the apparatus.

34. The method of claim 1, further comprising determining, based on a navigation service utilized by the apparatus, a location of the apparatus.

35. The apparatus of claim 10, wherein the object associated with a route of travel includes at least one indicium indicative of at least one characteristic of a road associated with the route of travel.

36. The apparatus of claim 10, wherein the at least one processor comprises a graphics

processing unit configured to detect the object.

37. The apparatus of claim 10, wherein the at least one processor is further configured to determine a location of the apparatus.

38. The apparatus of claim 10, wherein the at least one processor is further configured to determine, based on a navigation service utilized by the apparatus, a location of the apparatus.

39. The method of claim 32, further comprising identifying, by the graphics processing unit, the object to be a road marker indicative of at least one turn, in a direction of travel, of a road associated with the route of travel.

40. The method of claim 39, wherein the road marker includes an arrow indicative of the at least one turn.

41. The apparatus of claim 36, wherein the graphics processing unit is configured to identify the object to be a road marker indicative of at least one turn, in a direction of travel, of a road associated with the route of travel.

42. The apparatus of claim 41, wherein the road marker includes an arrow indicative of the at least one turn.