CLAIMS:

~~1. A system for automated gaming recognition, the system comprising:~~

~~at least one image sensor configured to capture image frames of a field of view including a table game;~~

~~at least one depth sensor configured to capture depth of field images of the field of view; and~~

~~a computing device configured to receive the image frames and the depth of field images, and configured to process the received image frames and depth of field images in order to produce an automated recognition of at least one gaming state appearing in the field of view.~~

~~2. The system of Claim 1, wherein the image frame comprise images within or constituting the visible spectrum or infrared or ultraviolet images.~~

~~3. The system of Claim 1 or claim 2, wherein the depth of field images comprise time of flight data points for the field of view and phase information data points reflecting depth of field.~~

~~4. The system of any one of Claims 1 to 3, wherein the at least one gaming state appearing in the field of view comprises one or more or all of: game start; chip detection; chip value estimation, chip stack height estimation; and game end.~~

~~5. A method of automated gaming recognition, the method comprising:~~

~~obtaining image frames of a field of view including a table game;~~

~~obtaining depth of field images of the field of view; and~~

~~processing the received image frames and depth of field images in order to produce an automated recognition of at least one gaming state appearing in the field of view.~~

~~6. The method of Claim 5, wherein the image frame comprise images within or constituting the visible spectrum or infrared or ultraviolet images.~~

~~7. The method of Claim 5 or claim 6, wherein the depth of field images comprise time of flight data points for the field of view and phase information data points reflecting depth of field.~~

~~8. The method of any one of Claims 5 to 7, wherein the at least one gaming state appearing in the field of view comprises one or more or all of: game start; chip detection; chip value estimation, chip stack height estimation; and game end.~~

~~9. A non-transitory computer readable medium, comprising instructions for automated gaming recognition which, when executed by one or more processors, causes performance of the following:~~

~~obtaining image frames of a field of view including a table game;~~

~~obtaining depth of field images of the field of view; and~~

~~processing the received image frames and depth of field images in order to produce an automated recognition of at least one gaming state appearing in the field of view.~~

~~10. The non-transitory computer readable medium according to Claim 9 wherein the image frame comprise images within or constituting the visible spectrum or infrared or ultraviolet images.~~

~~11. The non-transitory computer readable medium according to Claim 9 wherein the depth of field images comprise time of flight data points for the field of view and phase information data points reflecting depth of field.~~

~~12. The non-transitory computer readable medium according to Claim 9 wherein the at least one gaming state appearing in the field of view comprises one or more or all of: game start; chip detection; chip value estimation, chip stack height estimation; and game end.~~

~~13. A method of monitoring game play on a table surface of a gaming table, the method comprising:~~

~~analysing in real time captured images of the table surface to identify a presence of a game object in any one of a plurality of a first pre-defined regions of interest on the table surface;~~

~~in response to a game object being identified as present in the any one of a plurality of the first pre-defined regions of interest, recording a time stamp for a game event; and~~

~~transmitting game event data to a server, the game event data comprising the time stamp, an indication of the gaming event and an identifier of the any one of a plurality of the first pre-defined regions of interest.~~

~~14. The method of claim 13, wherein the game object is a game card.~~

~~15. The method of claim 13, wherein the game object is a position marker.~~

~~16. The method of any of claims 13 to 15, wherein the analysing comprises identifying a presence of at least one wager object on the table surface.~~

~~17. The method of claim 16, wherein the at least one wager object is different from the game object.~~

~~18. The method of claim 17, wherein the presence of the at least one wager object is identified in one or more of a plurality of second pre-defined regions of interest.~~

~~19. The method of claim 18, wherein the analysing comprises identifying one or more groups of wager objects in the one or more second pre-defined regions of interest.~~

~~20. The method of claim 19, wherein the analysing further comprises~~

~~estimating a height of each of the one or more groups of wager object with respect to the table surface; and~~

estimating a number of wager objects present in each group of wager objects.

21. The method of claim 20, wherein the analysis further comprises identifying a colour of an upper-most one of each group of wager objects.

22. The method of claim 21, further comprising automatically estimating a wager amount associated with each second pre-defined region of interest in which the presence of at least one wager object is identified, wherein the estimating is based on the identified colour of the upper-most wager object of each group of wager objects and the estimated number of wager objects in each group of wager objects in the respective second region of interest.

23. The method of any one of claims 13 to 22, wherein the captured images comprise multi-spectral images and the analysing further comprises multi frame processing of the multi-spectral images to identify the presence of the game object in any one of the plurality of the first pre-defined regions of interest or second pre-defined regions of interest on the table surface.

24. A system of monitoring game play on a table surface of a gaming table, the system comprising:

at least one camera configured to capture images of a table surface; and

a computing device in communication with the camera, said computing device configured to analyse in real time captured images of the table surface to automatically identify a presence of a game object in any one of a plurality of a first pre-defined regions of interest on the table surface.

25 The system of claim 24, wherein the game object is a game card.

26. The system of claim 25, wherein the game object is a position marker.

27. The system of claim 24 to 26, wherein the computing device is further configured to identify a presence of a at least one of wager object on the table surface.

28. The system of claim 27, wherein the at least one of wager object is different from the game object.

29. The system of claim 28, wherein the presence of the at least one wager object is identified in one or more of a plurality of second pre-defined regions of interest.

30. The system of claim 29, wherein the computing device is further configured to identify one or more groups of wager objects in the one or more second pre-defined regions of interest.

31. The system of claim 30, wherein said at least one camera further comprises

a depth sensing device to communicate to the computing device depth data of the game objects with respect to the table surface;

wherein said computing device is further configured to estimate a height of each of the one or more groups of wager object with respect to the table surface; and

wherein said computing device is further configured to estimate a number of wager objects present in each group of wager objects.

32. The system of claim 31, wherein the computing device is further configured to identify a colour of an upper-most one of each group of wager objects

33. The system of claim 32, wherein the computing device is further configured to automatically estimate a wager amount associated with each second pre-defined region of interest in which the presence of at least one wager object is identified, wherein the estimating is based on the identified colour of the upper-most wager object of each group of wager objects and the estimated number of wager objects in each group of wager objects in the respective second region of interest.

34. The system of any one of claims 24 to 33, wherein the captured images comprise multi-spectral images and the computing device is further configured to perform multi-frame processing of the multi-spectral images to identify the presence of the game object in any one

~~of the plurality of the first pre-defined regions of interest or second pre-defined regions of interest on the table surface.~~

~~35. A system for automated monitoring gaming events on a gaming table comprising:~~

~~a depth imaging device configured to capture depth of a plurality of game objects on a gaming region of the gaming table;~~

~~a plurality of visual imaging cameras configured to capture visual images of the gaming region;~~

~~a gaming configuration module comprising: configuration data associated with a plurality of games, configuration of the gaming table, location of regions of interest, patterns to recognise game objects, and definition of gaming events as a change in state of game objects on the gaming table; and~~

~~a computer system that receives data from the depth imaging device and the plurality of visual imaging cameras, and is configured to access the configuration data in the gaming configuration module to automatically recognise objects on the gaming region and gaming events occurring during a game.~~

1. A system of monitoring game play on a table surface of a gaming table, the system comprising:

at least one camera configured to capture images of the table surface; and

a computing device in communication with the at least one camera, said computing device configured to

receive, in real time, images of the table surface captured by the at least one camera,

analyse, in real time, at least one captured image of the table surface to identify a presence of a game object on the table surface,

based on identifying the presence of a game object on the table surface, determine whether the game object is a game start trigger initiating game object by comparing at least one visual feature of the game object with stored configuration data relating to a prescribed game start trigger initiating game object,

in response to determining that the game object identified as present on the table surface is a game start trigger initiating game object, determine that a game start event has occurred and record a time stamp for a game event, and

transmit game event data to a server, the game event data including an indicator of the game start event and the time stamp for the game event.

2. The system of claim 1, wherein the computing device is further configured to:

analyse, in real time, at least one captured image of the table surface to identify an absence of any game start trigger initiating game object on the table surface;

in response to any game start trigger initiating game object being identified as being absent from the table surface, determine that a game end event has occurred and recording a time stamp for a game event; and

transmit game event data to the server, the game event data including an indicator of the game end event and the time stamp for the game event.

3. The system of claim 1, wherein determination of whether the game object is a game start trigger initiating game object comprises:

pre-processing the at least one captured image to obtain a pre-processed image;

identifying at least one contour in the pre-processed image; and

comparing the at least one contour to at least one contour criteria to determine whether the at least one contour relates to a game start trigger initiating game object.

4. The system of claim 3, wherein the comparing the at least one contour to at least one contour criteria comprises comparing an area defined by the at least one contour with a pre-determined area that corresponds with an expected size of the game start trigger initiating game object.

5. The system of claim 3, wherein the comparing the at least one contour to at least one contour criteria comprises comparing a number of vertices defined by the at least one contour with a pre-determined number of vertices that corresponds with an expected number of vertices of the game start trigger initiating game object.

6. The system of claim 3, wherein the comparing the at least one contour to at least one contour criteria comprises comparing the cosine of an angle between joint edges defined by the at least one contour with a pre-determined value.

7. A method of monitoring game play on a table surface of a gaming table, the method comprising:

receiving, in real time and by a computing device in communication with at least one camera, images of the table surface captured by the at least one camera;

analysing, in real time, at least one captured image of the table surface to identify a presence of a game object on the table surface;

based on identifying the presence of a game object on the table surface, determining whether the game object is a game start trigger initiating game object by comparing at least one visual feature of the game object with stored configuration data relating to a prescribed game start trigger initiating game object;

in response to determining that the game object identified as present on the table surface is a game start trigger initiating game object, determining that a game start event has occurred and recording a time stamp for a game event; and

transmitting, by the computing device, game event data to a server, the game event data including an indicator of the game start event and the time stamp for the game event.

8. The method of claim 7, further comprising:

analysing, in real time, at least one captured image of the table surface to identify an absence of any game start trigger initiating game object on the table surface;

in response to any game start trigger initiating game object being identified as being absent from the table surface, determining that a game end event has occurred and recording a time stamp for a game event; and

transmitting, by the computing device, game event data to the server, the game event data including an indicator of the game end event and the time stamp for the game event.

9. The method of claim 7, wherein the determining whether the game object is a game start trigger initiating game object comprises:

pre-processing the at least one captured image to obtain a pre-processed image;

identifying at least one contour in the pre-processed image; and

comparing the at least one contour to at least one contour criteria to determine whether the at least one contour relates to a game start trigger initiating game object.

10. The method of claim 9, wherein the pre-processing the at least one captured image to obtain a pre-processed image comprises performing a canny edge detection process on the at least one captured image.

11. The method of claim 10, wherein the pre-processing the at least one captured image to obtain a pre-pre-processed image comprises dilating an output of the canny edge detection process to remove any holes between edge segments.

12. The method of claim 9, wherein the comparing the at least one contour to at least one contour criteria comprises comparing an area defined by the at least one contour with a pre-determined area that corresponds with an expected size of the game start trigger initiating game object.

13. The method of claim 9, wherein the comparing the at least one contour to at least one contour criteria comprises comparing a number of vertices defined by the at least one contour with a pre-determined number of vertices that corresponds with an expected number of vertices of the game start trigger initiating game object.

14. The method of claim 9, wherein the comparing the at least one contour to at least one contour criteria comprises comparing the cosine of an angle between joint edges defined by the at least one contour with a pre-determined value.

15. The method of claim 9, wherein the pre-processing the at least one captured image to obtain a pre-processed image comprises performing a global thresholding process on the at least one captured image.

16. The method of claim 15, wherein the pre-processing the at least one captured image to obtain a pre-processed image comprises eroding the at least one captured image to remove objects smaller than a predetermined size.

17. The method of claim 7, wherein the game start trigger initiating game object is a playing card.

18. The method of claim 7, wherein the game start trigger initiating game object is a dolly or position marker.

19. The method of claim 7, wherein the images of the table surface are either colour images, greyscale images or infrared images.

20. A non-transitory computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform the method of claim 7.