

AMENDED CLAIMS

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original claims 1 to 31 replaced by amended claims 1 to 29 (6 pages)]**

We claim:

1. A method for treating a plurality of still images for use in providing an
5 animated display, said method comprising:
 - (a) providing a plurality of source image frames, wherein each frame has
a vertical axis and a horizontal axis;
 - (b) vertically slicing each of said source image frames along said
horizontal axis to provide a plurality of image slices of equal width,
10 each having a frame slice number;
 - (c) distributing said image slices of each source image frame to a
display substrate in a predetermined sequence along the horizontal
axis.

- 15 2. The method as claimed in claim 1 wherein;
 - (a) said source image frames each have a sequential ascending frame
number and said frames having a first aspect ratio defined as a ratio of
the length of the vertical axis divided by the length of the horizontal axis;
 - (b) a plurality of image plates are provided, wherein each image plate
20 has a sequential ascending plate number, said plates having a first
aspect ratio of the same value defined as the ratio of the length of the
vertical axis divided by the length of the horizontal axis;
 - (c) said image plates are vertically sliced to provide a plurality of plate
slices of equal width, wherein each plate slice has an ascending plate
25 slice position number;
 - (d) said images slices of each source image frame is distributed to a
location on sequential image plates, wherein the location of each image
slice is determined by the addition of the frame number and its image
frame slice number less a predetermined integer., and its frame slice
30 number corresponds to the numeric plate slice location.

3. The method as claimed in claim 2 wherein the number of the plurality of image slices and plate slices is determined by a quotient of a desired optimal viewable image and the display image frame width.
- 5 4. The method as claimed in claim 1 and 2 wherein a plurality of opaque vertical bars are placed laterally abutting each source image frame prior to construction of each respective image plate.
5. The method as claimed in claim 2 wherein the source image frame comprises a motion picture film having a known source image frame rate, and the animation display has a frame rate, and wherein the animation display frame rate is viewable by an observer as similar to the same image frame rate.
- 10 6. The method as claimed in claim 2 further comprising the transfer of said sequential image plates to a display substrate.
- 15 7. The method as claimed in claim 6 wherein said transfer is selected from the following: laser printing, thermal ink jet printing, dot matrix printing, duratrans printing, continuous tone and electrostatic printing, plasma screen display, liquid crystal display and screen display.
8. The method as claimed in claims 1 and 2 wherein the animated display is provided with an aperture plate comprising a planar member having vertically-oriented opaque filters alternating with a plurality of vertically-oriented transparent apertures.
- 20 9. The method as claimed in claim 8 wherein said aperture plate has an outer surface and said outer surface is printed with a fixed display image printed across the plurality of opaque filters.
- 25 10. The method as claimed in claim 8 wherein said aperture plate is provided a plurality of opaque baffles fixed perpendicularly to the filter members.
11. The method of claim 8 wherein a plurality of aperture plates are provided in parallel.

12. The method as claimed in claim 8 wherein the opaque filters are infinitely thin.
13. The method as claimed in claim 8 wherein the opaque fillers have a perceptible depth.
- 5 14. The method as claimed in claim 5 wherein said animation display frame rate is viewable by an observer as similar to the source image frame rate by creating M sequential multiples of each source image frame, wherein M is the closest integer to as defined in the formula:

$$M = D \times S$$

10 Wherein D is the default observed frame rate determined by the quotient of horizontal axis resolution of source image frames measured in quantum of pixels and the horizontal axis resolution of the animation display measured in dots per inch and the expected velocity of an observer relative to the image substrate measured in inches per second; and S is the same frame rate of the original source image frames, expressed as frames per second.

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15. A method of providing an animated display, comprising:
- (i) providing a plurality of source image focus, wherein each such frame has sequential frame number,
- 20 (ii) slicing the frames into frame slices of equal width;
- (iii) providing a plurality of image receiving zones;
- (iv) dividing the receiving zones into a number of sectors, said number equal to the number of frame slices;
- (v) locating each frame slice into a corresponding receiving sector wherein
- 25 each frame slice occupies a position in the sector corresponding to its position in the image frame, thereby forming a set of receiving zones containing the sequential frame slices; and
- (vi) placing sets of zones on a display substrate according to frame number.

- 30 16. An apparatus comprising an animated display system comprising:

- (a) providing a plurality of source image frames, wherein each frame has a vertical axis and a horizontal axis;
- (c) vertically slicing each of said source image frames along said horizontal axis to provide a plurality of image slices of equal width, each having a frame slice number;
- (c) distributing said image slices of each source image frame to a display substrate in a predetermined sequence along the horizontal axis.

- 10 17. The apparatus as claimed in claim 16 wherein;
- (e) said source image frames each have a sequential ascending frame number and said frames having a first aspect ratio defined as a ratio of the length of the vertical axis divided by the length of the horizontal axis;
- (f) a plurality of image plates are provided, wherein each image plate has a sequential ascending plate number, said plates having a first aspect ratio of the same value defined as the ratio of the length of the vertical axis divided by the length of the horizontal axis;
- (g) said image plates are vertically sliced to provide a plurality of plate slices of equal width, wherein each plate slice has an ascending plate slice position number;
- (h) said images slices of each source image frame is distributed to a location on sequential image plates, wherein the location of each image slice is determined by the addition of the frame number and its image frame slice number less a predetermined integer., and its frame slice number corresponds to the numeric plate size location.
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18. The apparatus as claimed in claim 17 wherein the number of the plurality of image slices and plate slices is determined by a quotient of a desired optimal viewable image and the display image frame width.

19. The apparatus as claimed in claim 16 and 17 wherein a plurality of opaque vertical bars are placed laterally abutting each source image frame prior to construction of each respective image plate.
20. The apparatus as claimed in claim 17 wherein the source image frame comprises a motion picture film having a known source image frame rate, and the animation display has a frame rate, and wherein the animation display frame rate is viewable by an observer as similar to the same image frame rate.
21. The apparatus as claimed in claim 17 further comprising the transfer of said sequential image plates to a display substrate.
22. The apparatus as claimed in claim 17 wherein said transfer is selected from the following: laser printing, thermal ink jet printing, dot matrix printing, duratrans printing, continuous tone and electrostatic printing, plasma screen display, liquid crystal display and screen display.
23. The apparatus as claimed in claims 16 and 17 wherein the animated display is provided with an aperture plate comprising a planar member having vertically-oriented opaque filters alternating with a plurality of vertically-oriented transparent apertures.
24. The apparatus as claimed in claim 23 wherein said aperture plate has an outer surface and said outer surface is printed with a fixed display image printed across the plurality of opaque filters.
25. The apparatus as claimed in claim 23 wherein said aperture plate is provided a plurality of opaque baffles fixed perpendicularly to the filter members.
26. The apparatus of claim 23 wherein a plurality of aperture plates are provided in parallel.
27. The apparatus as claimed in claim 23 wherein the opaque filters are infinitely thin.
28. The apparatus as claimed in claim 23 wherein the opaque fillers have a perceptible depth.

29. The apparatus as claimed in claim 20 wherein said animation display frame rate is viewable by an observer as similar to the source image frame rate by creating M sequential multiples of each source image frame, wherein M is the closest integer to as defined in the formula:

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$$M = D \times S$$

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Wherein D is the default observed frame rate determined by the quotient of horizontal axis resolution of source image frames measured in quantum of pixels and the horizontal axis resolution of the animation display measured in dots per inch and the expected velocity of an observer relative to the image substrate measured in inches per second; and S is the same frame rate of the original source image frames, expressed as frames per second.

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