screen **1500**. Likewise, the brightness control data may decrease the brightness for those pixel blocks having a small viewing angle relative to the person. The brightness may vary depending on the particular color being displayed. For example, if the displayed color of a particular pixel is red, the cell(s) of the micro-display module **1210** corresponding to red and corresponding to the display position of the pixel may receive the corrected brightness data, whereas the corresponding cell(s) of the remaining micro-display modules **1212**, **1214** may not receive the corrected brightness data because they correspond to green and blue, which may be set to "off" and therefore want to reflect as little light as possible. The corrected brightness data may therefore include separate RGB components to drive each of the micro-display modules **1210**, **1212**, **1214** independently.

[0130] A ray analysis may project a test image(s) or test rays on the three-dimensional display screen **1500** to view any lateral secondary color aberrations due to an ultra-wide projection lens. The results of the analysis may also be used to determine where and when color aberrations occur and thereby provide corrected color data. The resulting correction codes may be used to alter color data on a pixel-by-pixel, or pixel block by pixel block, basis.

[0131] As mentioned above, the three-dimensional display screen **1500** may originate as a three-dimensional computer design which is made up of numerous polygonal meshes. By referring to the three-dimensional display screen **1500** as a series of polygonal meshes, each 4×4 pixel block may be projected onto the three-dimensional display screen **1500** using the polygonal meshes as a map. Using the four corners of the 4×4 block, a 4-point correlation approach and approximation method of mapping may be used to develop a data matrix to be stored by the three-dimensional controller **107**. Each 4×4 block may correspond to an element of the matrix, as mentioned above, and each element may contain a correction code for that element. An approximation method, as used by those of ordinary skill in the art, may be used to simplify the number of control points or the complexity of the polygonal mesh.

[0132] **FIG. 22** is a schematic representation of an exemplary depiction of compensating for the difference between a received two-dimensional input video signal **1310** and a displayed three-dimensional image. Compensating for the difference may result in an overall two-dimensional image data being converted for display on a three-dimensional display screen **1500** by correcting for those pixel images that may be distorted and allowing undistorted pixels images to remain unmodified. Referring to **FIG. 22**, to compensate for the possibility that a displayed 4×4 pixel block may be different than the received 4×4 pixel block due to distortion, the actual display of the video image may be delayed. The delay may be set for 16 horizontal lines causing the three-dimensional image controller **107** to not begin displaying line **1** until line **16** of the input video signal **1310** has been received by the digital video interface **1320**. Using a (pixel, line) addressing scheme, the correction code **1334** for the 4×4 pixel block beginning at address **(16, 8)** may instruct the imaging processor **1330** to move the 4×4 pixel block to address **(36, 20)** using an offset of (20, 12). A correction value of (2, 0) may be also given to duplicate a pixel every second pixel. The displayed 4×4 pixel block may therefore not only change location, but may also become longer due to the correction value. The pixel block of the actual video image in the image buffer **1340** may remain in the same memory location whereas the corrected pixel block may be displayed at a different video scan address. In other words, using a two-dimensional screen, the pixel block would have been displayed at **(16, 8)**. The corrected pixel block remains at memory address **(16, 8)** to maintain image integrity (e.g., avoid putting an image of an ear where a cheek should be), but is displayed at video scan address **(30, 20)** for the three-dimensional display screen **1500**. Using LCoS micro-display modules **1210**, **1212**, **1214**, those cells corresponding to video scan address **(30, 20)** display the corrected pixel block rather than cells **(16, 8)** which would normally display that same pixel block on a two-dimensional screen. A larger delay may be used if the pixel block correction falls outside of the 16 line delay. Overlaying one displayed pixel block on another may therefore correct for distortion due to displaying a two-dimensional pixel image on an angled surface by making the two-dimensional pixel block image wider, longer or shorter as required. In some instances, such a correction may not needed (e.g., the two-dimensional pixel block image looks the same on the three-dimensional display screen **1500** as on a two-dimensional display), in which case a flag may be set to disable the correction, or the offset code and correction value may each be set to (0, 0).

[0133] The brightness value may likewise be used to cause the corrected pixel block to be displayed brighter or dimmer, as required. The ray analysis data may be used to vary the color as needed due to lateral secondary color aberrations. In the example of **FIG. 22**, the corrected pixel block has been made dimmer and the color has been changed as represented by the cross-hatched markings. As with the offset and correction value, brightness and color corrections may not be needed, in which case the values may be set to zero or a flag may be set to disable the corrections. Additional correction techniques may be provided by other methods including a program sold by Elumens, Inc. under the trademark TruTheta, or using a system and method as disclosed in U.S. Pat. No. 6,104,405, which is expressly incorporated by reference herein.

[0134] **FIG. 23** is a flowchart of a correction routine **1800** that may be stored in the correction memory **1350** of the three-dimensional controller **107** and executed by the imaging processor **1330**. Referring to **FIG. 23**, the correction routine **1800** may begin operation at block **1802** during which the imaging processor **1330** may retrieve and read one or more correction codes from the correction memory **1350**. The correction code **1334** may be pre-fetched by the imaging processor **1330** prior to receiving and displaying the pixel block to which the correction code corresponds. For example, the correction code **1334** for the first 4×4 pixel block may be fetched by the imaging processor **107** prior to pixel **1** of line **1** being displayed and may be held by the imaging processor **107** until pixel **4** of line **1** is displayed, during which the next correction code **1334** is fetched for pixels **5-8** of line **1**. The same correction code **1334** may again be retrieved and read before pixel **1** of line **2** is displayed.

[0135] Upon retrieving the correction code at block **1802**, the correction routine **1800** may read the corresponding pixel block data at block **1804** from the image buffer **1340**. Generally, the pixel block data is part of a larger set of two-dimensional video frame data used as the two-dimensional input video signal **1310**. Each pixel block may include