

Georgia3D was formed in 1990 to promote, preserve, and collect all forms of stereo photography, both past and present.

President:
Ralph Reiley
reileys@att.net

Vice President:
Bill Moll
whMoll@aol.com

Treasurer/Membership:
Julia Moor

Secretary:
Larry moor

Projectionist:
Larry Moor

Competition Director:
Steve Panayiotto
Webmaster:
Steve & Suzanne Hughes
Newsletter Editor:
Ralph L. Reiley
reileys@att.net
678-772-0935

Membership Information:
Information can be obtained by calling Ralph Reiley @ 770-493-1375,
reileys@att.net

Refocus That Please – By Ralph Reiley

Note that the club formerly known as the **Atlanta Stereographic Association**, is now known as **Georgia3D**. We will meet for a 2nd time in a row at the **Chamblee Library meeting room located at: 4115 Clairmont Rd, Chamblee Ga, 30341, 770-936-1380**. It looks like this will be our home for now. The main order of business is that we will start collecting dues again to rebuild the treasury. We had 19 at the last meeting, a good sign that the quarterly meetings seem to be working. This meeting will have a video presentation by Ken Kistner, a digital club competition, and a 3-D images using picasso. After the meeting, we will adjourn to the Fortune Cookie for supper. See page 2 for details.

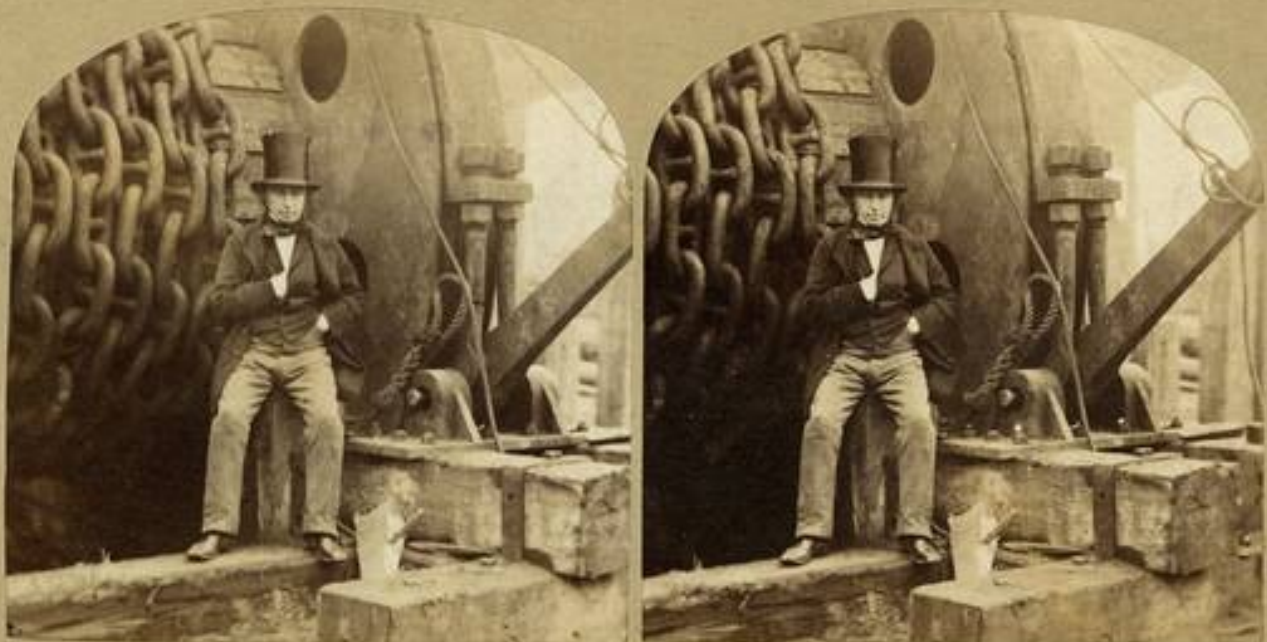


Meeting Schedule:

11:00 am	Setup
12:30	Club meeting with Show & Tell
1:00	3-D Video by Ken Kistner
2:00	Club Digital Competition (1920 x 1080 format), You can enter the same four images in the Southern Cross that is closing soon.
3:00	3-D Images using picasso by Darleen Phillips, using StereoPhotoMaker training.
4:30	End and Breakdown
5:30	Supper at Fortune Cookie

Contact Bill Moll at WHMoll@aol.com or 423-702-5779 for more information.

Photo of the Month: Photo by Robert Howlet circa 1857, of Kingdon Issambard Brunel, 1806-1859, noted British Mechanical and Civil Engineer. There was nothing the man could not build, bridges, tunnels, railroads and steam ships. In 1852 work began on the largest steamship ever build, the Great Eastern. The ship was intended to be a luxury passenger ship for the England to Australia trade. A series of accidents and some bad press doomed the ship to financial loss. It was refitted and used to lay the first trans-Atlantic cable in 1860, and fate stepped in and the American Civil War prevented this from being a success. Brunel's impressive abilities were often thwarted by his massive ego, he still remains one of the most unique engineers of the 19th Century.



It is now over four years since the Technical Page first went to press as an aid in bringing new Members up to speed in stereo. And many of the current New Members have not had the opportunity to read some of the material contained in the early issues of the column. Accordingly our leader has suggested that the time was ripe for a review of fundamentals, not merely of stereo, but of photography in general. This month I shall try to recap some of the underlying principles of the art, and, in later issues touch on the mechanics of making a stereo picture.

IMAGE FORMING - EYE AND CAMERA

It is customary for non-professionals to make the casual assumption that a camera is some kind of mechanical recording eye, and by extension that a stereo camera is two mechanical eyes coupled together. There is just enough validity in this assumption to create many false conclusions, especially for stereo. The eye is in fact only a pinpoint imaging device with scanning capability. Except in the very center of the retina there is no resolving power at all, merely a broad sense of form and color. The eye sees therefore by scanning the scene a point at a time. The camera in contrast makes an extended image of good resolution throughout, which is viewed by the eye using the scanning technique.

IMAGE "PERCEPTION" - STEREO

A stereo image either in the real world or in photography exists only in the mind of the viewer. It is created by his brain using the inputs of his two pinpoint scanners. Accordingly stereo photography must provide the means for getting two sets of inputs to the brain of the viewer which are as nearly as possible like those it would have received from a real scene. This it does by providing two extended images which the viewer can scan as he would the real scene. Obviously they must be sharp throughout so that wherever the viewer elects to direct his attention he will perceive as nearly as possible what he would have perceived from the real scene. The only thing we can not provide him is the sense of focusing for distance, because the camera images are located a fixed distance from his eyes. We do provide him with the sense of convergence, and he must get used to the fact that focusing does not accompany it.

DEPTH OF FOCUS - DEPTH OF FIELD

The image in a camera is produced by a pencil of light whose angle depends on the lens aperture, that is, each point of the image receives light from all parts of the lens aperture. Where this pencil just touches the film a sharp image is formed. At other points nearer or farther from the lens only a small circular blur is formed for each point of the subject. The depth over which this blur is small enough to be considered acceptable is called the depth of focus. The smaller the cone of light, the greater will be the depth of focus. What we are looking for in stereo is for the depth of field from the nearest point of the subject to the farthest point to correspond to an acceptable depth of focus. This will only happen if lens focal lengths are kept short and apertures are kept small, the latter to restrict the pencil angle mentioned above. The camera manufacturer has thoughtfully included a scale on the focusing mount to tell you when the depth of field requirement has been met. To get a properly viewable stereo picture you need only conform to the requirements of this handy scale.

PERSPECTIVE IN STEREO

Whereas in planar photography we get only indirect inferences as to dimensions in the line of sight, in stereo the process provides us with the same depth perception input as if we were looking at the real scene. What, you may ask, does that have to do with perspective? In planar photography when we use a telephoto lens things in the far distance look too large compared to things in the foreground. We accept this and say the picture has telephoto distortion, but it doesn't change our perception of the solidity of the objects, because that is largely generated in our brain from our recognition of the objects. However in stereo a specific depth message is delivered to the viewer. Therefore telephoto lenses will deliver a perceived shape which is too shallow and therefore unacceptable. The reverse will be the case if we use too short a focal length. The rule must be in stereo: view the picture with the same included angle under which it was taken, whether hand viewed or projected.