

## Change Is A Good Thing- David C Albrecht, DCD Advanced Technologies

There are few truths in life more prevalent than that “things change.” No matter how we structure our lives, there is always something that causes us to do things differently, thereby forcing us to change. Sometimes, changes can be gradual, like the flowing of the tides. Even these can be drastic. Try fishing in the middle of the Bay of Fundy during a tidal change. In no time you can be sitting on a mud flat. Like wise, if you walk on that mud flat at low tide, you may want to have a boat handy, because as the tide changes once more, you WILL need it.

So what does a discussion on change have to do with a web site dealing with imaging? Plenty. Our industry has seen quite a few changes in the past ten years, most of them quite drastic. About 15 years ago we started seeing the first digital capture systems. They were quite costly and only a few studios had them. Now you can't call yourself a professional photographer if you are not using a digital camera system of some fashion.

The problem with change is two fold. First, if it happens too slowly, we may not be aware it is happening at all. Take children for instance. If you see your son or daughter day in and day out, you may not notice they are growing. It happens so gradually. Go on a trip for three weeks and come back and you can usually see a noticeable difference in height of a growing person.

The second problem with change is when it happens quickly. We are not prepared for the differences the changes bring about. Anyone that has had to re-outfit their studio from film to digital knows this. Before, you could survive without some type of computer in the studio. You only used it for billing and correspondence. Once you go digital, the computer is a necessity, and not a low end one either. It has to have the largest hard drive, the most memory and fastest clock speed to be able to process the large amount of data generated from the digital image. And then we add the need for editing, color profiling, outputting, etc. and all of a sudden you have 20 or 30K invested in your “camera” system!

One of the basic laws of physics is that change is a constant, in that, things are constantly changing! A book sitting on a desk is changing as it is laying there. It is absorbing water vapor, the paper is breaking down and the glue is becoming brittle. If left there long enough, it would fall completely apart.

The same holds true for the systems we use in our imaging businesses. A great tool for evaluating images is a light booth. It provides a consistent, repeatable environment to view images in various forms. But like the book, it is changing as time progresses. The change of greatest concern is that occurring with the lamps within the booth. All lamps, incandescent, fluorescent or whatever, have a life expectancy. Once they reach that life, they need to be replaced. With an incandescent lamp, the life span is fairly easy to determine. When the filament breaks, it is time to replace the lamp! Even so, sometimes this is not a good enough indicator. For quartz halogen lamps, a type of incandescent lamp, the filament can break and then *re-weld itself together!* The result is a lamp with

less intensity and drastically altered color temperature. It also draws more amperage which can damage the power circuitry of the item in which it is used.

Fluorescent lamps also have a life expectancy based on hours of usage. This usually gets ignored as the lamp is changing so slowly. Even though a lamp may have a rated life of 2,500 hours, the lamp will continue to operate for far longer than that. Look at the ends of the fluorescent lamps. If you see a black band at both ends about an inch wide, the lamp is well into its replacement schedule. It is not uncommon for lamps to be used for 10,000 or 20,000 hours before someone realizes they need to be replaced, and this becomes a big problem. They are left with that “Bay of Fundy” tidal shift in both the light levels and intensity of the lamps. Lamps lose their intensity and shift in color temperature over time. By not replacing the lamps as specified by the manufacturer, you wind up making color judgments under poor lighting conditions. When the lamps are finally replaced, you see a drastic change and assume something has been altered in the new lamps. Actually, the new lamps are just operating within the intensity and color range for which they were designed. It is the old lamps that were so far out. If color judgments were made using the old lamps and then you want to go back and review your decision (or match the previous print/image) you will see drastically different results in the image itself.

All lamps have a “rated” life. This life represents the period of time the lamp is expected to provide consistent intensity and color output. Once the lamp reaches this rated life, it should be replaced. In this way you will not experience drastic visual differences between the old and new lamps. Old lamps can still be used, just don’t use them in color critical areas. Do you have a customer viewing room where you keep the light box? Use the old lamps for the room and the room itself will be more compatible with the light quality of the light box. Lamps should always be replaced as a set. Never replace just one lamp unless they were *just* put in and you happen to have received a bad lamp.

The best way to determine the expected life of a lamp is to contact the manufacturer. As an example, daylight lamps from GTI Graphic Technology have a rated life of 2500 hours. This is typical for color critical fluorescent lights, but should be confirmed with the manufacturer. Some have life expectancies as low as 1500 hours. Refer to the company’s web site or call your local representative. They should be able to give you a reliable figure. And keep in mind, you need to know the life for “color critical applications.” This will be different from the life expectancy for general lighting applications.

When replacing lamps, make it a point to perform some routine maintenance. Wipe down the reflector and diffuser as described by the manufacturer to remove the buildup of dust and other contaminants. The small amount of time you take doing this will be reflected in the quality and repeatability of your work.

Change is a fact of life. We all like to be comfortable and resist change, just don’t do it with the lamps in your light box!