The key element to quality photography is light. It is the paint that photographers use to apply to a film canvas. Photographers control it with shutter speeds, apertures, and film speed. When the light level drops, you can slow your shutter speed or open the aperture to compensate. The problem is that slowing the shutter speed can decrease image sharpness, and opening the aperture will reduce the depth of field.

In the past, grabbing a high-speed film was often the last resort. Thankfully, that has changed with the introduction of films like Fujicolor's new Superia X-TRA 800 and Superia 1600. These films provide the extra speed you need, without sacrificing image quality.

So how do they do it? A few years ago Fujifilm introduced a film called Reala that incorporated the use of a 4th Color Layer technology. Fujifilm found that most films with the standard color-sensitive layers of red, green and blue didn't always see the color the same way as the human eye. The extra layer compensated for some of these problems, especially with the green area of the spectrum. Reala worked especially well in mixed lighting and under fluorescent lights. It had a long tonal curve and a wide exposure latitude, which made it perfect for complex lighting situations.

In 1999 the 4th Color Layer technology was incorporated into Superia X-TRA 400 and eventually the entire Superia line of color negative films. The high-speed members of the Superia family, Superia X-TRA 800 and Superia 1600, are the latest to receive this technology. The other four members of the Superia family include Superia 100, Superia Reala, Superia 200, and Superia X-TRA 400.

Wait, there's more. Both new emulsions take advantage of Fujifilm's Fine Σ (Sigma) Technology that uses thin, flat, uniformly shaped silver-halide crystals. The combined technologies give you a fine-grain, high-speed film with smooth tonal gradations capable of holding fine detail and extreme enlargement. Wow!

If you are already shooting ISO 200–400 films, a jump to ISO 800–1600 may not seem like much. Remember though, that each time you double the film speed, you only need half the amount of light for the same exposure. Increase the film speed 4X, and you need only ¼ the amount of light. This increased film speed translates to sharper images via higher shutter speeds or increased depth of field with smaller apertures. The variety in the Superia family gives you a wide selection of film speeds so you can correctly document most any photo situation.

We have been testing film for more than 25 years, and have come to realize that there is no perfect test location, but there are some spots that serve to challenge film's capabilities. We selected four locations to try low light, long telephoto lenses, high-contrast situations, mixed light, zoom lenses, and high-
The Portland Zoo has always been a great place to test film because it requires long lenses, and many of the exhibits are very dark. We loaded up one Nikon F5 with X-TRA 800, and the second with the Superia 1600 emulsion. Our lens selection included 14mm and 20mm wide-angles for the low-light interiors. We used a 75–300mm zoom plus a 500mm mirror lens for animals that were great distances from the camera lens.

Our first stop was the Alaska Tundra exhibit, where we found several wolves posing, completely backlit by the sun. This was almost too good to be true. The sunlight was wrapping around their fur coats, creating an extreme lighting ratio. Our shutter speed hovered above $1/1000$ thanks to the high film speed. Time would tell if the film could hold the detail with this contrasty lighting.

We migrated on to the new marine exhibit where you can view sea lions both from underwater and above the water line. The seamless plexiglass wall was so invisible that it gave the eerie feeling that you could just reach out and touch these playful critters. We removed our long lenses and replaced them with the 14mm and 20mm wide-angles. The exposures were running around $\frac{1}{250}$ at f/5.6 which enabled us to stop the action and still maintain good depth of field. Again the lighting was very contrasty, and we wondered if we had pushed the limits of the film. The sea lions swam right up to the invisible wall as if they were drawn toward our cameras. We checked out a few more exhibits and then headed off for a more difficult test, an old historic museum.

The good news was that the museum's subjects were frozen in time, so movement was not an issue. The bad news was that the lighting was VERY low. How low you ask? So low that even with ISO 1600 film we had exposures of $\frac{1}{20}$ with the aperture wide open. We set the over/under dial to

Superia X-TRA 800’s image quality is good enough that it can be used as an all-around film, but its specialty is available light, indoors and out, topside and underwater. (It does work well with flash, too.) The film handles fluorescent and mixed lighting very well. And it’s fast. These shots were all made hand-held.
-1 stop, which translated to EI 3200 and exposed a few more images. In theory, the film can handle between 1–2 stops underexposure with little quality change. The processed results will tell the tale.

Our next stop was a blimp hanger that is one of the most impressive structures on the West Coast. It is the World's Largest Wooden Building and now houses an air museum, although it still serves as a test site for blimps under construction. The building is so tall that you can see it from miles away. There is so little available light that we wondered if any detail would show in the final image. We pulled out our 14mm and 20mm lenses and loaded up the Superia 1600 emulsion. We metered between the dark walls and the sunlight streaming through the door and exposed a wide range of exposures from ½s second at f/4 down to ½ wide open.

We would have to wait a few hours till the sun had set for a final test. The carnival was in town and we decided that it would be perfect to challenge Superia 1600. The lighting was a nightmare with tungsten and fluorescent illumination mixed in with the colorful lights of the rides. Exposures of ½s at f/4 were more than adequate for wide angle. We tried our hand at a few blurred images of the fast-moving rides for added effect, and then called it a night.

Good thing the C-41 process is short, because our anticipation was running high. In no time we had our negatives laying on the light box and gave them intense loupe scrutiny. Wow! The grain structure on both films was very fine, which is amazing for such high film speeds. The contrast seemed a little higher than we had expected, but there was detail throughout. The images with a high scenic brightness range that had caused us concern, showed detail in both highlights and shadows. The tonal gradation was very smooth, and captured even the subtle detail. The color saturation was excellent, even when both emulsions were shot under mixed lighting. When printed, both emulsions reproduced the same, so you could easily change from one film emulsion to the next.

We scanned several images to see the results of digital transfer. We don't know exactly how they did it, but the grain for both emulsions was tight. It was not exaggerated in the out-of-focus areas as is often the case with high-speed films.

These two new Superia films provide the perfect solution to the challenge of low light and fast action. Superia X-TRA 800 and Superia 1600 are ideal for everything from point-and-shoot zoom-lens cameras to SLR photography with long lenses. Their 4th Color Layer emulsion technology provides outstanding sharpness and fine grain that makes them perfect companions for any photo excursion.

For further information about Fujifilm products contact Fujifilm at 800/800-FUJI or check out their website at www.fujifilm.com.