

LYYN[®] real-time video enhancement



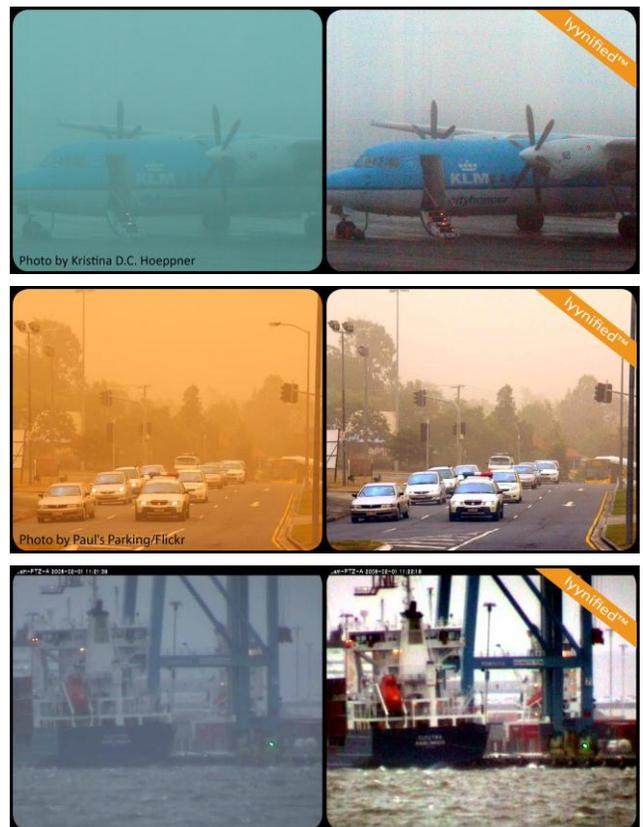
Soldiers in red dust storm in Iraq, colors and details enhanced by LYYN[®]

The problem

Outdoor CCTV surveillance is often plagued by low visibility due to weather, low-light or imperfect illumination. Low visibility is typically a cause of disappointment for the purchaser of a surveillance system. Additionally, the effective use of surveillance video, for incident detection and response, is often degraded by low visibility.

Many technologies can be applied to problem of low visibility but most use advanced, and usually costly, imaging technologies like IR and thermal imaging and do not offer the benefits of real-time color video.

LYYN real-time video enhancement takes a different approach. The method utilizes normal color video from a standard CCTV color camera. Each video frame is processed in real-time and the colors are modified to



increase visibility. Even marginal differences in color and contrast can be used to enhance object visibility, and all this is in real-time. The result is video images that constantly self-adjust to the environment so that an observer can focus on surveillance objectives.

How and why LYYN real-time video enhancement works

The LYYN technology is a result of research into the human vision system. By enhancing image components that assist human interpretation and understanding of images, more data is used by the brains filtering system. The effect is that we see more features through visual disturbances.

When we look at something, signals from red-sensitive, blue-sensitive and green-sensitive receptors in the eye retina travel to centers in the brain, where we interpret them, understand them and recognize patterns or objects. Equal signal levels in the different receptors means that we perceive a gray color. The eye and brain can discern only about two-dozen shades of gray. But if there is the slightest hint of unbalance in the red, green and blue signals, the eye and brain can differentiate between many thousands of color shades and intensities. Thus color, if at all existent in a picture, is a powerful characteristic for object identification and extraction from a scene.

This is why the LYYN process is better than a pure contrast enhancer: it helps the human brain use its strengths, i.e. color separation and object identification even in an apparently "gray" scene.

LYYN products can reduce the visibility degrading effects from fog, snow, rain, dust, haze as well as low-light and subsea applications.

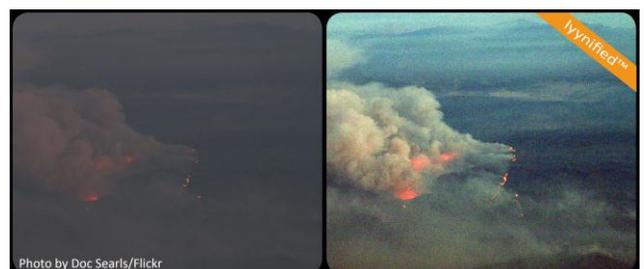
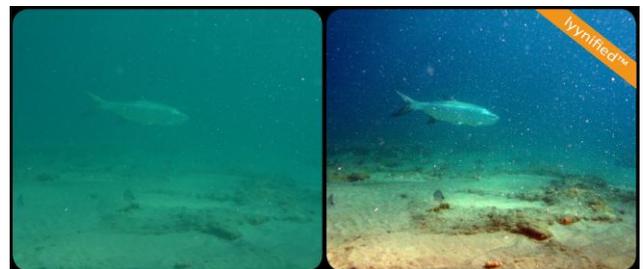
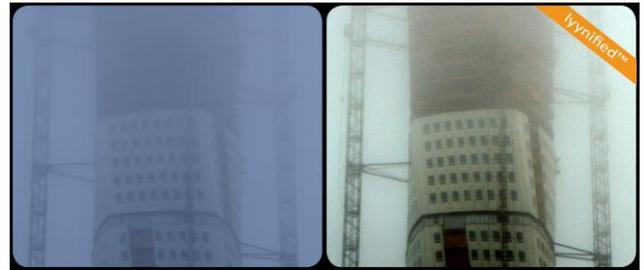


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