

# Defense and Security

## INNOVATIVE VISUAL DISPLAY TECHNOLOGIES



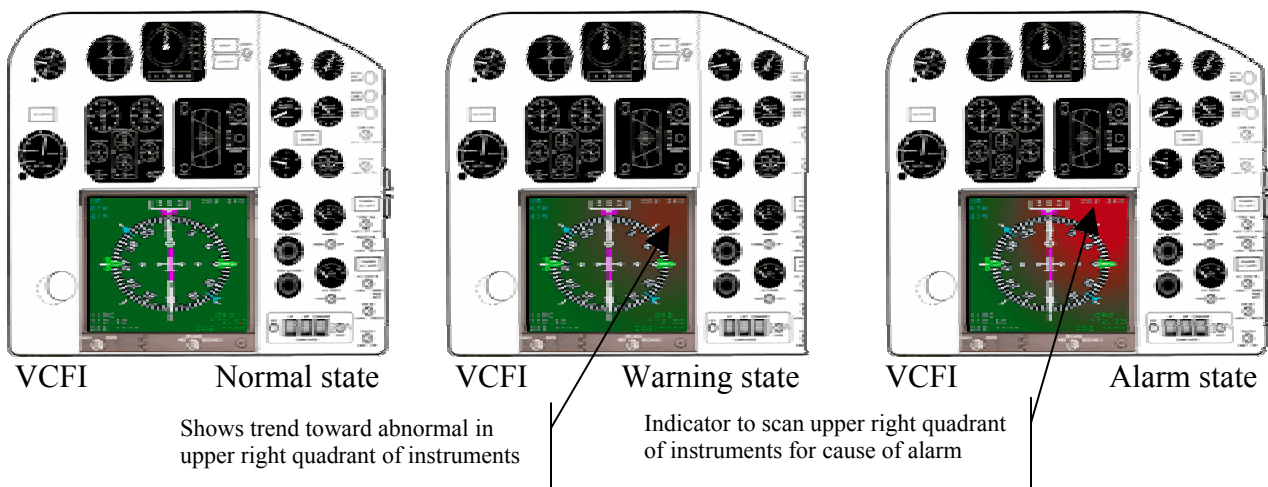
**TransLumen** creates proprietary and patented visual display technologies for software, firmware and content. These data and image visualization technologies automatically manipulate images, seamlessly and continuously in a stream, below the level of human visual perception. This image stream retains the integrity of a still image, but is, in fact, a continuously evolving, dynamic image. The technologies work with both still and motion images, uniquely bridging the gap between traditional print media and video. Integrated with numeric, text or graphic content, they provide a new way to experience information in an unobtrusive manner without the introduction of “*visual noise*.”

### Primary Technology Focus

TransLumen’s objective is to bring to market a revolutionary Human Machine Interface. This interface provides visualization advancements for Homeland Defense, DoD (Force Protect), facilities management and other areas that require increased Situational Awareness, trend analysis and forecasting.

TransLumen’s Visual Cue Feedback Indicator (VCFI) is an advanced data visualization tool that incorporates TransLumen’s patented imaging technology. The VCFI takes a stream of high density/high bandwidth data and channels it into an easily comprehensible visualization of constantly evolving information; mitigating or eliminating the risk of critical data going unnoticed due to radical swings in volume. This is accomplished without increasing the “*visual noise*” coefficient (screen clutter) or using up valuable screen real estate.

### Visual Cue Feedback Indicator



Visual Cue Feedback Indicator’s trend visualization technology is aimed at environments that are Situational Awareness critical; such as cockpit instruments, intelligence analysis and disaster recovery. TransLumen can also enhance Situational Awareness via image tiling, normalization, object ageing, clutter reduction and rate of change detection and control.










## Defense and Security Application Areas

**Human Computer Interface/Artificial Intelligence** - TransLumen's technology is applied to design elements in an interface that guides or trains users toward accurate and clearly defined outcomes. It is now possible to provide intelligent interpretive direction by employing formerly unused areas of display/control panels.

*Temporal Image Transition* employment methods include:

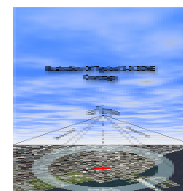
-  Graphical representations with usable progressive views providing interpretive information that increases a human operator's visualization and performance capabilities in the area of Human-Automation Interaction
-  Incorporation of knowledge-based system to interpret the utilization of color, texture and luminance among other attributes, and their gradations to display the results

**Training Systems Evaluation Research** - TransLumen has various levels of applicability for implementation in the design of training and research simulations including gaming for software and the Internet. The fact that the technology can impact, change and utilize photographic image inputs makes the transfer between the simulator and real environments more effective in bridging from simulation to real life circumstances.

-  Battlefield Simulation - TransLumen's technology can be incorporated into environmental backgrounds for target recognition designed to finely tune situational awareness for visual recognition skills. The technology can be applied to Virtual Reality (VR) and non-VR environments.
-  Training Measurement Standards - Under controlled test circumstances, an individual's level of perception in simulation can establish their ability to perceive change. In addition, testing benchmarks and performance measurement tools can also be developed.
-  Cyber Sickness - An environment which relies on digital change can be enhanced by TransLumen's unobtrusive changes in imaging. Individuals benefit from the reduction of "visual noise" and unnecessary stimuli, providing a more natural environment, which can be adapted to specific needs and surroundings.

**PDA's and Wireless** - TransLumen's technology can be deployed for advanced distributed learning (ADL) applications for use in commercial off the shelf (COTS) personal digital assistants (PDAs) and other wireless devices. Applications include assessment and treatment options for injury and disease scenarios, chemical warfare simulation and mapping.

**Urban and Terrain Mapping** - Patented imaging technology increases the visualization and performance capabilities of three-dimensional urban environments through advanced scene management.



TransLumen Technologies, LLC is an Illinois company established in Y2K. US patents #6,433,839 and #6,580,466 have been awarded and other applications filed.

