

## Tandent Announces

# Trillien™ FR

### A Revolutionary Preprocessor That Enables

### “Face Recognition Everywhere”®

#### Available Now!

October 20, 2010, London. Tandent Vision Science Inc. today introduces the first preprocessor for face recognition powered by **Trillien** technology. The **Trillien FR** preprocessor enables face recognition in real-world settings such as mass transportation systems, airports, office buildings, sports arenas, city streets and other environments where face recognition was previously not possible.

#### Breakthrough Technology

Current face recognition systems require highly controlled lighting. Thus, kiosks or other conspicuous and constraining lighting setups are required whenever images are captured either for identification or for creating searchable databases. This special lighting requirement severely restricts the range of settings in which face recognition can be deployed and image acquisition is both conspicuous and requires cooperation.

**Trillien FR** eliminates the need for kiosks or special lighting for both database creation or individual identification. **Trillien FR** makes it possible to extend accurate face recognition to myriad applications in the naturally illuminated world. Face recognition can now be done everywhere.

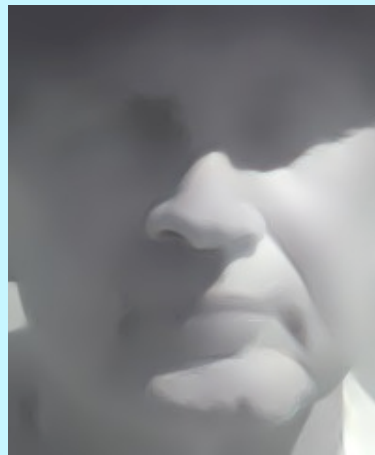
Using proprietary techniques derived from our research on human vision, **Trillien FR** converts images from off-the-shelf still or video cameras into images that accurately simulate “kiosk” face lighting. Whatever the original illumination conditions, images preprocessed with **Trillien FR** depict only shading and features used by current face recognition systems. Cast shadows and other unwanted illumination features that confound the recognition process are eliminated.



Original Image



Trillien Reflectance



Trillien Illumination

Face recognition applications require the use of shadowless face lighting to capture both “probe” images as well as the database or “gallery” of images to which the probe images will be matched. This lighting constraint seriously limits the settings and circumstances where face recognition technology can be deployed.

**Trillien FR** eliminates this need for special lighting. The top image, for example, was captured outdoors with severe shadows that would interfere with standard face recognition technology. The bottom left image shows a real-time Trillien FR image that is specifically designed for face recognition systems.

**Trillien FR** includes the shading required by face recognition algorithms but eliminates cast shadows and other unwanted illumination features making **Trillien** functionally equivalent to controlled lighting. Using **Trillien** preprocessors, face recognition systems can now be used in extreme outdoor lighting as well as other settings where illumination cannot be controlled such as mass transit systems, airports, office buildings and stadiums. **Trillien FR** is demonstrated live and in real-time at the Biometric Exhibition and Conference 2010.

Commercial interest in face recognition technology has increased substantially in recent years due to significant technical improvements combined with the worldwide need for improved security. Most analysts estimate worldwide face recognition industry annual revenues at \$500M to \$1B even though current technology functions only in highly controlled illumination. By making it possible to deploy face recognition in settings where illumination is not controllable, **Trillien FR** is positioned to enable considerable global expansion of the face recognition industry.

Since current **Trillien FR** preprocessors operate at 15 fps, they can be used with video surveillance systems for real-time identification of moving persons. High-performance face recognition can now be pursued wherever security is a concern.

## **About Trillien**

**Trillien Face Recognition Everywhere**<sup>®</sup> and *Computer Vision Everywhere*<sup>®</sup> preprocessors are the result of 60 person-years of research and development since 2004 and is based upon our own research in the field of human vision. **Trillien** is unlike any computation ever developed for the computer vision field and is the subject of nearly forty pending and issued pioneer patents. **Trillien** is an essential technology for expanding the worldwide commercial deployment of most types of computer vision.

Applications for **Trillien** preprocessors include face recognition; assisted driving; manufacturing inspection; mobile robotics; surveillance; tracking; perimeter control; target acquisition; satellite and aerial reconnaissance image analysis; internet image and video search; visual data archiving; motion picture special effects and gaming. The **Trillien FR** preprocessor demonstrated live at London Biometrics 2010 is specifically designed to be backwards compatible with current commercial face recognition systems.

## **About Tandent**

Tandent Vision Science Inc., founded in 2005, is a privately held computer vision research and development company headquartered in San Francisco with research facilities in San Francisco, New York, Pittsburgh (adjacent to Carnegie Mellon University) and Portland, Oregon.

Tandent was founded to solve fundamental problems limiting growth of the computer vision industry. Tandent is investing heavily in computer vision and believes that computers that can see will have a broad impact on the computer industry and the world. Tandent pursues both human vision research as well as computational computer vision and is committed to playing a central role in the growth of the global computer vision industry.

## Contact Information

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### Career Opportunities

Tandent Vision Science, Inc. is a unique research and development company focused on very long-term foundational research in computer vision. Tandent has attracted an outstanding group of scientists including distinguished academic researchers, accomplished industrial scientists, and some of the most outstanding recent graduates in the field of computer vision. If you are interested in working with us, please contact us through our website.

### Other Information

For other information about our company, please visit our website [www.tandentvision.com](http://www.tandentvision.com)