



## **CyberExtruder launches Aureus 3D software to significantly improve facial recognition**

*CyberExtruder, a leader in identity management solutions, announced today the release of its new Aureus 3D™ facial reconstruction software, which has shown an increase in facial recognition matching accuracy by 26.5 percent when compared to even the best 2D facial recognition products.*

Newark, NJ ([PRWEB](#)) July 12, 2011 -- CyberExtruder, a leader in identity management solutions, announced today the release of its new Aureus 3D™ facial reconstruction software, which has shown an increase in facial recognition matching accuracy by 26.5 percent when compared to even the best 2D facial recognition products.

This evidence from tests for the U.S. Department of Homeland Security demonstrates how Aureus 3D's ability to generate a 3D representation from 2D images advances the available technology for suspect and victim identification. "Unique solutions like this become an essential resource for the intelligence, security and law enforcement communities," said Jack Ives, co-founder and chief operating officer for CyberExtruder. "Aureus 3D is expected to be a valuable new tool for those engaged in mission critical facial recognition."

The National Institute of Standards and Technology (NIST) first recognized the value of utilizing 3D information as a biometric tool in the Facial Recognition Vendor's Test (FRVT) of 2002 and in FRVT of 2006. The NIST reported findings of FRVT 2006 and the Iris Challenge Evaluation 2006 established the first independent performance benchmark for both 3D facial recognition and iris recognition technology, which concluded that the performance of both is comparable.

Despite previous technology advancements, law enforcement and security professionals have continued to struggle with a lack of availability of quality images with which to identify and match "persons of interest." Most surveillance cameras are mounted overhead so they can follow a person's movements through a scene. Because of this, individual frames taken from these cameras make it difficult, if not impossible, to identify the person unless they happen to look directly into the camera.

Software constructs 3D models from 2D images

According to Ives, Aureus 3D significantly improves the accuracy of facial recognition systems by taking a subject's facial image and reconstructing it into a 3D format that factors in varied poses and facial expressions, and compensates for poor lighting and partial images. When Aureus 3D reconstructs a face, its patented processes are able to determine the person's original pose relative to the camera. This information enables Aureus 3D to produce results which lead to matches when a subject may be turned away from the camera as much as 70 degrees and a downward (or upward) angle of 25 degrees.

"No other system has been able to accomplish this," said Ives. "This patented technology significantly increases the likelihood of a match where poor quality images are involved."

Better models make better matches

The product's resulting 3D model, called a 3D facial template, is used to perform identification and verification tasks. "Aureus 3D analyzes one (or more) recorded images of a person's face and uses its vast knowledge of the



human face, with its understanding of environmental factors, to craft a very unique 3D model of that person,” said Ives. “It’s a claim no other software package can make.”

Securlinx CEO Barry Hodge deploys Aureus 3D in his company’s forensics applications. He is currently using the technology with a major law enforcement agency in New Jersey, as well as for AmberVision enabling local law enforcement personnel to identify missing children. “Our ability to integrate Aureus 3D into portable (laptop) forensic stations for law enforcement agency investigative units is helping them identify images from crime scenes (i.e. convenience store robbery and other places with surveillance cameras) and occasionally from police sketches,” said Hodge. “We extract faces from surveillance videos, present them to Aureus 3D and then through the face matching software, where we are seeing a significant improvement in identifying unknown suspects.”

“Upgrading to the new Aureus 3D software is easy and virtually seamless; it’s compatible with any facial recognition system, can be added to existing surveillance networks or used as a standalone workstation,” Ives added.

#### About CyberExtruder

CyberExtruder, based in Newark, N.J., is a leader in identity management technology solutions. Known for reconstruction technology that transforms two-dimensional (2D) images to three-dimensional (3D) models, CyberExtruder’s unique solutions have become an important facial recognition resource for the intelligence, security and law enforcement communities. The Company’s software algorithms automatically create 3D meshes of a human head in real-time from one or more unconstrained images. In the early 2000’s, CyberExtruder’s 3D technology was renowned in the entertainment and video gaming industries and more recently powering avatars and personalized Second Life characters. This legacy of innovation paved the way for Aureus 3D™, a software product which improves the matching and identification capabilities of facial recognition systems by taking a subject’s facial image and reconstructing it into a 3D format that factors in varied poses and facial expressions as well as compensating for poor lighting and partial images.

The Company has secured four U.S. Patents for methods to generate a 3D representation from a 2D image, and secured similar patents from the European Patent Organization to extend the company’s intellectual rights protection into European Union and Pacific Rim countries. CyberExtruder currently holds research and development contracts with multiple U.S. government agencies to develop biometric software for improving identity management.

For more information about CyberExtruder visit <http://www.cyberextruder.com>.

For more information contact:

Ivy Cohen Corporate Communications, Inc.

Ivy Cohen, (212) 399-0026 or [ivy\(at\)ivycohen\(dot\)com](mailto:ivy(at)ivycohen(dot)com)

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**Contact Information**

**IVY COHEN**

IVY COHEN CORPORATE COMMUNICATIONS, INC.

(212) 399-0026

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