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## OU invention may revolutionize security

By **Jennifer Charney**, *OU Staff Writer*

An airport surveillance camera records the face of every traveler passing through the security checkpoint. Each face is instantly converted into a unique pattern — like a fingerprint — and scrutinized against a database of collected patterns belonging to known terrorists. Before you can say James Bond, the would-be perpetrator is identified, stopped and rendered harmless. Soon, such a system could serve as a powerful tool in the fight against terrorism.

Protecting the public is just one of the possible applications that make the Omni Face Detector one of the most fascinating inventions to emerge from OU's **Department of Computer Science and Engineering**.

Developed by Ishwar Sethi, professor and chair of the Department of Computer Science and Engineering, and a group of former and current doctoral students, the Omni software system incorporates principles of an emerging technology called biometrics — automated systems that identify people based on their unique, unchangeable physical characteristics. Biometric systems compare a scanned image of a physical characteristic to a stored sample of that trait.

Some buildings, for example, grant access to employees only after they place their hands on a scanning device. Automated teller machines can identify bank customers by scanning their eyes. Fingerprint scans replace passwords on some personal computers. Face recognition software is used to identify people in similar ways. Someday, people may not have to carry identification cards or car keys; they need only open their eyes, reveal their face or offer a fingerprint.

Sethi's Omni software, which was developed with a \$106,193 grant from **Philips Research USA** in Briarcliff Manor, NY, allows for the sophisticated identification and indexing of visual and audio information and is expected to revolutionize the use of such information.

You can read more about Sethi and all the uses for his Omni software in the Spring Issue of OU Magazine.

For more information on Sethi and his projects, visit the **Department of Computer Science and Engineering** Web site.

### SUMMARY

A computer software program developed by an OU professor and a group of doctoral students may serve as a powerful tool in the fight against terrorism. The Omni software system incorporates principles of an emerging technology called biometrics.

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