

FOR IMMEDIATE RELEASE
August 11, 2003

For more information:
Dr. Mitchell M. Rohde
(734) 429 - 9100 voice
(734) 429 - 9113 fax
info@quantumsignal.com
<http://www.quantumsignal.com>

Quantum Signal Launches Biometrics Experiment

(ANN ARBOR, MI) -- Quantum Signal, LLC has launched a comprehensive face and voice data collection experiment to support the development of its advanced signal processing techniques for biometric applications.

Biometrics - the measurement of physical or behavioral characteristics to verify human identity - is being considered as a security tool in both the public and private sectors. The field covers a wide range of authentication technologies: from fingerprint recognition to voice authentication to identification through keyboard typing technique.

This activity is part of a \$1.83 million, 3 year grant from the National Institute of Standards and Technology's Advanced Technology Program (NIST ATP). The focus of this project is to develop and test novel math-based biometric algorithms using both speech recordings and images of the face. If successful, the developed technology will result in 95+% accurate biometric authentications and significantly increase the state of the art.

The work being conducted is important because current biometrics technologies cannot overcome variation and "noise" common in real world situations. Variations that pose difficulties include those inherent in an individual (e.g., beards or eyeglasses), and those due to aspects of data collection (e.g., facial camera angles, lighting and poor cell phone operation). These variations can cause accuracy of conventional systems to drop to 50% or less.

Quantum's experimental facility, housed in an office building adjacent to the University of Michigan's central campus, is being used to gather a database from several hundred diverse subjects that incorporates such variation. Face photos are taken under different lighting angles, facial angles, and expressions. Simultaneously, voice recordings are made using both a high quality microphone and an ordinary telephone. The process takes about half an hour, and subjects are compensated for their time. Subjects participate in up to four experimental sessions over the course of several months. The data will be used by Quantum Signal engineers to refine their newly developed algorithms. This data will provide a resource to both Quantum Signal and others developing advanced biometrics.

When successfully developed and commercialized, Quantum's new technology will be used to improve airport security through better screening; to improve safety and security and provide new telematic features in automotive vehicles through better occupant sensing; and to enable faster automated verification in telecommunications. In addition, the core technology being developed will be applicable not only to face and voice authentication, but also in other current and future biometric modalities such as fingerprints, iris recognition, gait analysis, or even complete MRIs of the human body.

Interviews and press graphics are available by contacting Quantum at (734) 429 - 9100.

About NIST

NIST is a non-regulatory federal agency within the U.S. Commerce Department's Technology Administration. The Advanced Technology Program (ATP) bridges the gap between the research lab and the market place, stimulating prosperity through innovation. Through partnerships with the private sector, ATP's early stage investment is accelerating the development of innovative technologies that promise significant commercial payoffs and widespread benefits for the nation. As part of the highly regarded National Institute of Standards and Technology, the ATP is changing the way industry approaches R&D, providing a mechanism for industry to extend its technological reach and push out the envelope of what can be attempted. The ATP awards are highly competitive. Since 1990, 4,696 proposals were submitted and only 581 projects were awarded nationally.

About Quantum Signal

Founded in 1999, Quantum Signal LLC is an engineering services company specializing in advanced signal processing and pragmatic algorithmic solutions for its automotive, aerospace, and biometrics clients. As a leader in this dynamic field, the Ann Arbor-based firm is transitioning exciting signal processing technologies out of the ivory tower and into a wide variety of commercial applications. For additional information on Quantum Signal or to participate in the data collection experiment, please visit our Web site at www.quantumsignal.com or call (734) 429 - 9100.