Nonconfidential Summary Disclosure

UM 3330: EchoGaiT™ - Gait Monitoring Technology

THE TECHNOLOGY

EchoGaiT uses patented micro-Doppler ultrasound technology for gait measurement and fall risk assessment. The EchoGaiT technology addresses the limitations of other gait monitoring systems by offering a portable, inexpensive, and easy to use wireless device.

EchoGaiT monitors key fall risk indicators in a person's gait, records kinematic trend data, and provides users with a convenient qualitative and quantitative analysis of a person's gait. This in-depth analysis allows users to recognize stability issues as they develop, instead of after they occur.

EchoGaiT is designed to identify human gait and provide gait analysis using a variety of key gait parameters including: mean peak foot velocity, stride length and duration, gait speed, swing and stance phase percentages, and symmetry indices. EchoGaiT is compact, non-contact, non-invasive, Bluetooth enabled, and can distinguish between multiple users and pets. EchoGaiT can be incorporated into a variety of user settings.

EchoGaiT is user friendly and requires minimal training to operate. The device can be placed on the floor or mounted to a wall or doorway. EchoGaiT automatically records and analyzes gait measurements once activated through either manual control or automatic motion detection.

Market opportunities include usage in clinical settings, assisted living facilities, residential homes, and indoor training facilities.

COMPETITIVE ADVANTAGE

Falls among older adults cost the US health care system over $34 billion annually. Gait speed is one of the best measures for determining if an adult is at risk for falling. Traditional gait assessment methods typically require a trained medical professional and result in minimal trend analysis data which leads to a decreased likelihood that preventative action against falls will ever be taken.

Quantitative gait assessments are often expensive and require a trained technician for proper setup. Qualitative gait assessments such as proctor observations and self-reported questionnaires are inexpensive, but do not provide adequate data for proper gait assessment.

EchoGaiT provides the precision and accuracy of large, expensive motion analysis technologies used by biomechanics researchers to real-world applications and a variety of user settings.

DEVELOPMENT POTENTIAL

Proof of concept and prototype testing have been performed in both laboratory and real world settings. We are now seeking a development and commercialization partner. A detailed technical dossier is available under the terms of a NDA.

PATENT STATUS

U.S. 7,894,305

PRINCIPAL INVESTIGATOR(S)

James Sabatier, Ph.D.

KEYWORDS

Gait, Fall Risk Assessment, Micro-Doppler, Ultrasound, Stability Analysis, Gait Speed, Walking Speed

PUBLICATIONS

Available upon request.

GREGORY SECHRIST
Licensing Associate
The University of Mississippi
University, MS 38677
662.915.6534
gssechri@olemiss.edu

OFFICE of TECHNOLOGY COMMERCIALIZATION
UNIVERSITY OF MISSISSIPPI