Laboratory for New Media’s 15th Exhibition-
“Let’s Walk! The first step for innovation”
July 15(Wed), 2015 – April 11(Mon), 2016

The National Museum of Emerging Science and Innovation (Miraikan) (Chief Executive Director: Mamoru Mohri) will present a new exhibition, “Let’s Walk! The first step for innovation” in the Laboratory for New Media on the 3rd floor, from Wednesday, July 15, 2015 to Monday, April 11, 2016.

We recognize friends and family by their size, shape, and the way they walk, even if they are too far away for us to see their faces. This is because everyone walks differently in their own unique manner, from the way they swing their arms to their posture, to the length of their strides. The way we walk can be said to be an unconscious expression of our individuality, expressed with our entire body.

With the two interactive activities at this exhibit, you can experience technology for identifying individuals and estimating age based on minor quirks in the way people walk. This technology is being researched as part of the JST CREST “Behavior Understanding based on Intention-Gait Model” project (Research Director: Yasushi Yagi, Ph.D.) . It performs a mathematical analysis of videos of people walking, and determines their characteristics. Since individuals can be identified from a distance and there is hope for its potential as a next-generation investigative technology for wide-area surveillance, to keep people safe and find suspects in airports or crowded streets.

What unique characteristics in the way you walk will come to light when you walk in front of the camera? What kind of world awaits us when our individuality can be instantly known based on how we walk? Come and walk with us to learn about the information environment of the future, where individuals can be identified by their walk.

[Outline]

Title: Laboratory for New Media, 15th Exhibition “Let’s Walk! The first step for innovation”
Period: July 15(Wed), 2015 – April 11(Mon), 2016
Opening Hours: 10 a.m.–5 p.m. (Last entry: 30 minutes before the closing time)
Admission Fee: Adults ¥620; persons 18 years of age and under ¥210
(Groups of eight or more individuals) Adults ¥490; persons 18 years of age and under ¥160
Closed: Tuesday (open on national holidays) and New year holidays (December 28 to January 1)
Venue: Permanent Exhibition Zone, 3F, Miraikan
Organizers: Miraikan, Japan Science and Technology Agency CREST “Behavior Understanding based on Intention-Gait Model”

General inquiries
National Museum of Emerging Science and Innovation (Miraikan)
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Inquiries concerning the exhibition
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[Details of Interactive Activities]
After getting an exhibit ticket at the entrance, you can experience these interactive activities.

Walk straight along the path. Even if you think you aren't doing anything special, characteristics such as the way you swing your arms, your speed, and the length of your strides combine to create your own way of walking. Walking is a cyclical movement. By filming you walking and analyzing the sequential silhouette images produced from this video, it is possible to learn about the individuality of the way you walk. By comparing your results to past results, it is also possible to estimate your age. The results can be printed out on a card and taken home.
Time required: Approximately 2 minutes

Featured too, is the world's first system for identifying individuals based on how they walk. How are individuals identified using information from measuring how they walk? The exhibit will introduce software used in criminal investigations to identify suspects based on footage from security cameras.

2. Let's Walk! Find Out How Healthy You Are–Measuring Cognitive Ability
While walking in place on top of a square mat, you will respond to a quiz as the questions are displayed on a monitor in front of you.
As people age and they become less able to walk, the risk of dementia is said to increase. By filming and analyzing your walk, it is possible to determine the health of your brain. The results can be printed out on a card and taken home.
Time required: Approximately 3 minutes

*Personal information (gender, age, height, images of face and full body) will be collected. When getting your ticket for the exhibit, an explanation of usage guidelines for this personal information will be given. The information collected will be used for future research with your permission (or the permission of a parent or person in charge for participants under 12).
*If the exhibit is crowded, numbered tickets may be provided to organize the wait. The exhibit may be closed without warning due to malfunctions or other issues.

[Profile of Supervisor]
Yasushi Yagi, Ph.D.
Director of the Institute of Scientific and Industrial Research (ISIR), Osaka University/Intelligent Media Professor
Research Director of JST CREST “Behavior Understanding based on Intention-Gait Model”
Received his Master of Engineering (Control Engineering) from Osaka University in 1985, and then his Doctor of Engineering. After working as a researcher for Mitsubishi Electric Corporation, and a research associate and associate professor at Osaka University, he became a professor of the Institute for Scientific and Industrial Research (ISIR) in 2003. In 2012, he became director of the ISIR.
He specializes in research on processing visual information. He has developed an omnidirectional camera that can observe 360° around it, and an AI system to provide advanced visual functions to robots. He is also involved in research on practical applications of the gait analysis research being presented in this exhibit, such as assisting criminal investigations and caring for the elderly.

[What’s Laboratory for New Media?]
This is a flexible space that periodically introduces exhibits linking creativity and information technology. Visitors can learn how it is possible to make the world even more interesting with information technology.