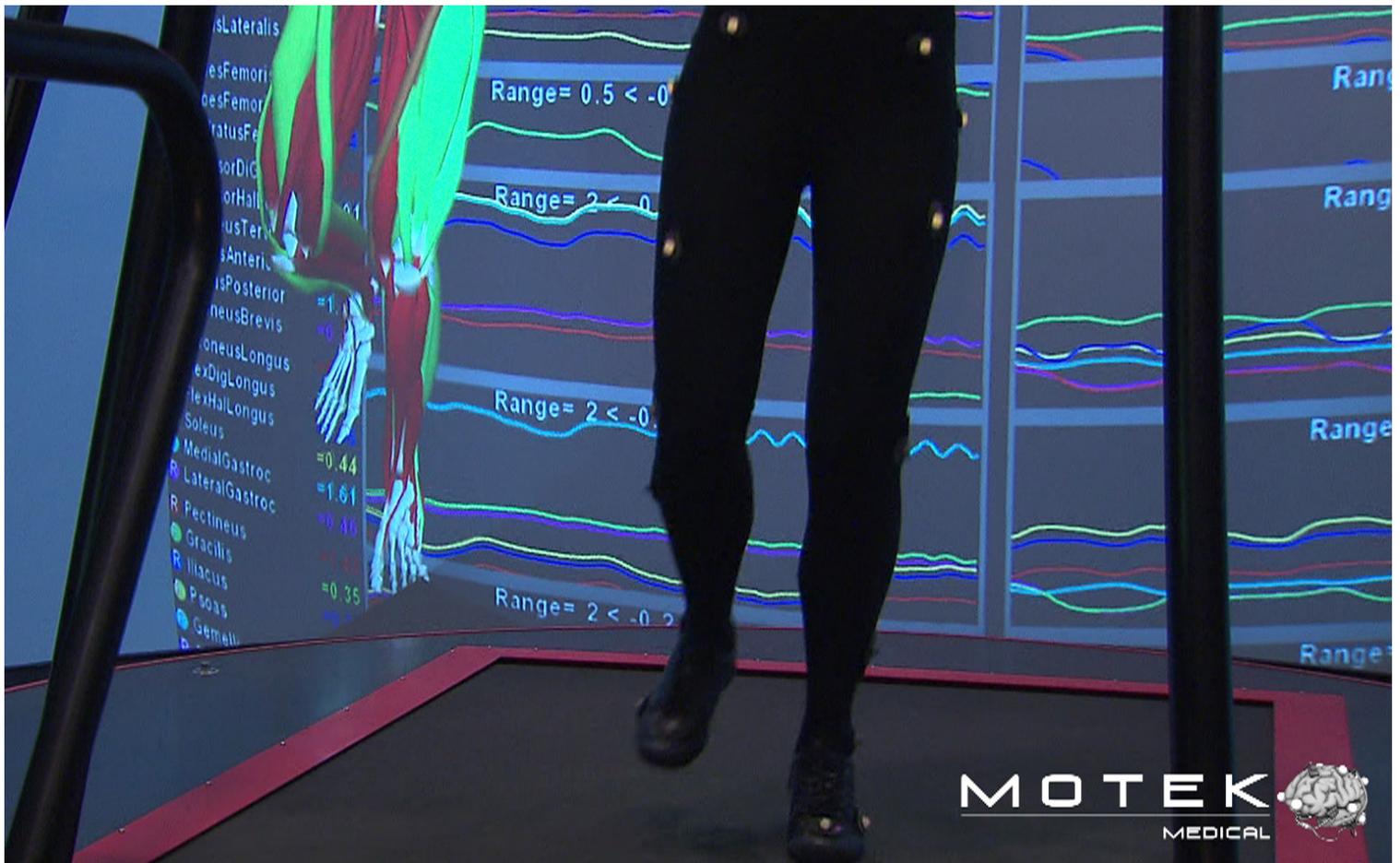




# MOTEK Medical + Virtual Rehabilitation



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[Oshri Even-Zohar, CTO, MOTEK](#)

# MOTEK Medical +Virtual Rehabilitation



## Challenge

MOTEK Medical is widely recognized for its innovations in rehabilitation technology and its achievements in shortening recovery processes for orthopaedic and neurological patients with post traumatic stress disorder (PTSD).

After receiving funding from the European Commission, MOTTEK developed the first ever virtual reality training environment able to give instantaneous feedback to the patient – the CAREN system. It required a motion capture system to transmit data of the patients' movements into the animated VR world in real-time.

## Solution

MOTEK has been a successful Vicon customer since 1994. In 2008, they decided to upgrade the existing MX13+ range to the latest T-Series motion capture system after achieving impressively accurate results on other measurement projects.

The CAREN system operates with 13 of the latest Vicon T-160 cameras

offering 16 megapixels of resolution and a full frame capture speed of 120fps, which equates to four times more resolution than any other motion capture camera on the market.

Adjusting the focus and aperture of cameras can be achieved remotely: which means fewer interruptions when a patient is being treated within the VR environment.

Oshri Even-Zohar, CTO at MOTTEK said, "Vicon equipment is used extensively at MOTTEK; both in the entertainment and the medical divisions. We find Vicon provides the best out there in terms of camera quality, real time robustness and sophistication of software tools. Furthermore the support relationship is very good and responsive to our, sometimes complex, needs."

## Results

The VR system is used to rehabilitate sufferers of PTSD such as soldiers returning from war. Before the CAREN system, the best a patient could hope for would be one-to-one counseling,

which can take months, even years to be effective.

CAREN can re-create any environment from a standard street scene to flying in a helicopter. By utilizing the latest Vicon motion capture technology, it provides a safe environment for patients to face their fears directly and overcome them at a much faster pace.

## Technology Profile

Vicon T-160 13 Camera System

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