



ACMIT

Austrian Center for Medical Innovation and Technology

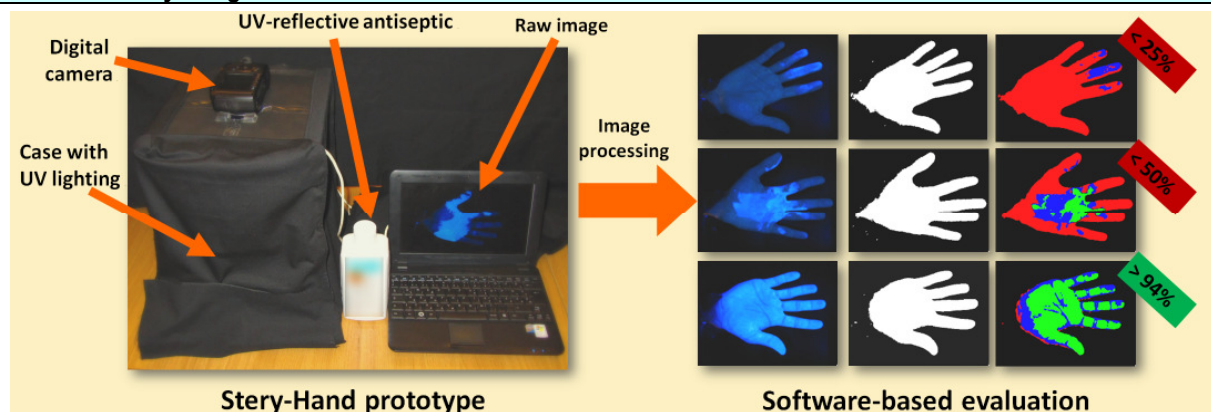
Hauptstandort	Wiener Neustadt, Niederösterreich
weitere Standorte	
Thematische Schwerpunkte	R&D for work-flow improvement in medical processes, training and education for medical procedures

Success Story Kurzversion

“Stery-Hand”—A breakthrough in medical hand hygiene compliance and technique control

The goal of the project is to significantly reduce the incidence of Hospital-Acquired Infections (HAI). The “Austrian Center for Medical Innovation and Technology”(ACMIT) and the Budapest University of Technology and Economics (BME) are working on an innovative system that can give immediate and objective assessment of hand washing of the medical staff. “Stery-Hand” is a mobile device using ultraviolet (UV) light and digital imaging to visualize the application of regular, alcohol-based disinfectants—mixed with UV-reflective powder. It highlights disinfected versus unaffected areas after hand rubbing, and provide an overall quality score.

Success Story Langversion



The importance of hand hygiene has been known since Ignaz Semmelweis (1818-1865), however, fundamental problems remain existent with hand washing. Hand rubbing with alcoholic disinfectants is the most effective way to reduce the spread of germs, pathogens and therefore hospital-acquired infection rates, however, its optimal insertion into the medical work-flow has not been achieved yet. Our approach is to leave the original hand washing workflow intact, by using a non-invasive UV-marked commercial alcoholic hand rub, then employing digital image processing to determine clean areas and overlay it on the segmented hand. Images are taken in our prototype box—called “Stery-Hand”—that gives repeatable and immediate measurement of hand washing quality based on the UV traces of the soap, and visualizes the results in an intuitive form. Moreover, the system enables long-term monitoring of individual and institutional performance, providing an objective measure of improvement.

Successful landing

“Stery-Hand” was tested in the clinical environment on over 5500 people in medical universities and hospitals in Hungary, Romania and Singapore. It has been widely used at public occasions in Austria and France. Among others, “Stery-Hand” received the Innovact European Campus Award and the ICPIC Innovation Academy Award.

The system has the potential to become the next breakthrough in hand hygiene control. Improving compliance and technique decreases hospital costs, and also hinders the spread of major epidemics like SARS or H1N1.

Supported by ACMIT

The COMET competence center ACMIT and BME have joined their efforts with company partners to create the next generation of the device, support the clinical trials and to take the next bold step towards commercialization.

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