



Lifelong  
Learning  
Programme



Kheiron  
Training  
System

# KTS Project Newsletter

Project Newsletter No.3  
25/05/2015

## About the KTS Serious Game

The game follows the story of a young alchemist and his/her quest in finally creating the "Philosophers Stone".

To do that, the protagonist (player) will have to pass through creating a number of other objects first, so that his/her knowledge expands as well as use those before he/she has the capability to complete his/her quest, to create the Philosophers Stone.

Below we have selected a couple of in-game screenshots:



In-game Screenshots

The following tasks are selected as candidates to be integrated in the KTS serious game:



Moving  
back & forth



Transfer objects  
between hands



Grasping  
objects



Triangulation



Touch  
static & dynamic  
elements

## Learning Objectives

- Improve visual perception;
- Improve hand-eye coordination;
- Learn how to perform movements that are done with the dominant hand safely with the non-dominant hand;
- Improve the significantly reduced depth perception;
- Enhance movement accuracy;
- Learn how to perform accurate movements;
- Perfect bimanual skills.

## Next step: Validation

During the last stage of the project, the KTS serious game will be carried out in four different countries: Spain, Germany, Hungary and Romania during the last four-month term 2015. For validation, users will be able to play and test the serious game under the guidelines defined by the consortium members in order to achieve comparable results between the different validation sites.

A questionnaire will be designed with questions for residents and medical students for evaluating the KTS serious game after the trials.

### General themes that will be covered by the questionnaire might include:

Sufficiency of the Serious Game introduction	Skills improved by the Serious Game	Easiness of use
Skills gained by playing are useful in the Operating Room	Level of enjoyment using the Serious Game	

If you want to participate in the validation of the KTS serious game, do not hesitate to contact the responsible of your country to check availability:

	Spain	lfsanchez@ccmijesususon.com		Hungary	gyorgyweber@yahoo.com
	Germany	korb@istt.htwk-leipzig.de		Romania	office@medisfoundation.com

## Second Progress Meeting in Budapest

**Topics discussed** at the Second Progress Meeting (May 10th-12th, 2015) in Semmelweis University, Budapest:

- Serious game architecture - relevant scenarios/tasks/skills / competencies integrated into the serious game
- Results of the serious game development
- Validation Plan
- Quality Plan
- Administrative issues



The 23rd Congress of the European Association of Endoscopic Surgery (EAES) will take place in June 3rd - 6th in Bucharest, Romania

Visit the congress' webpage at [tiny.cc/EAES](http://tiny.cc/EAES)



## Dissemination Activities

The 23rd Congress of the European Association of Endoscopic Surgery (EAES) will take place in June 3<sup>rd</sup> - 6<sup>th</sup>, 2015 in Bucharest, Romania.

KTS project will have a booth in the congress exhibition area, displaying a roller up with general information about the project. In the same time, a video about the KTS serious game will be showed continuously for the visitors. Dr. Călin Tiu will offer explanations about the project and about the game to the interested persons.

Besides, Dr. Sánchez-Margallo will also present an electronic poster entitled "Psychomotor skills training in minimally invasive surgery through the use of serious games: Kheiron Trainig System", describing the project development.

Dr. Werner Korb held a presentation about the KTS Serious Game at the "132. Kongress der Deutschen Gesellschaft für Chirurgie" (<http://www.chirurgie2015.de/>) in Munich. The event took place from April 28th until 1<sup>st</sup> of May.



### Future Dissemination Events

29<sup>th</sup> International Congress and Exhibition Computer Assisted Radiology and Surgery (CARS2015), to be held in Barcelona on June 24<sup>th</sup> -27<sup>th</sup> 2015. A poster entitled "E-learning serious game for surgical skills training: kheiron training system" will be presented.

19<sup>th</sup> Edition of the Course on Spinal Advanced Microsurgery ([www.sam-course.de](http://www.sam-course.de)) to be held in Munich from September 30<sup>th</sup> to October 2<sup>nd</sup> 2015. The KTS Demo will be presented to the German surgeons.

National Surgery Conference to be held in Bucharest, Romania, on October 14<sup>th</sup> - 17<sup>th</sup> 2015, at the Palace of Parliament. The KTS Demo will be presented to the Romanian surgeons.

33<sup>rd</sup> Annual Congress of the Spanish Society of Biomedical Engineering (SEIB) (<http://caseib2015.gbt.tfo.upm.es/>), to be held in Madrid on November 4th-6th. A presentation about KTS Serious Game will take place.



# Consortium



**Centro de Cirugía de Mínima Invasión Jesús Usón**

Francisco M. Sánchez Margallo - [msanchez@ccmijesususon.com](mailto:msanchez@ccmijesususon.com)



**Leipzig University of Applied Sciences (HTWK Leipzig) – ISTT**

Werner Korb - [korb@istt.htwk-leipzig.de](mailto:korb@istt.htwk-leipzig.de)



**AVACA Technologies**

Nikos Skarmneas - [nskarmneas@avaca.gr](mailto:nskarmneas@avaca.gr)



**Semmelweis University**

György Wéber - [gyorgyweber@yahoo.com](mailto:gyorgyweber@yahoo.com)



**POLITÉCNICA**

**Biomedical Engineering and Telemedicine Centre  
Universidad Politécnica de Madrid**

Enrique J. Gómez - [egomez@gbt.tfo.upm.es](mailto:egomez@gbt.tfo.upm.es)



**MEDIS Foundation**

Călin Tiu - [office@medisfoundation.com](mailto:office@medisfoundation.com)

## Contact

**Webpage:** [www.kts-project.eu](http://www.kts-project.eu)

**Address:** *Centro de Cirugía de Mínima Invasión  
Jesús Usón*  
Carretera N-521, km 41,8, 10071  
Cáceres, Cáceres  
Spain

**Telephone:** (+34) 927 18 10 32  
(+34) 927 18 10 33

**Email:** [cpo.kts@ccmijesususon.com](mailto:cpo.kts@ccmijesususon.com)



This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Project reference no.: 543202-LLP-1-2013-1-ES-KA3-KA3MP