Health Games on the Move
An overview on state of the art in European games for health

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13 November 2014
“The serious games industry as a whole was worth some $1.2 billion in 2010, and is estimated to grow to $10 billion by 2015.”

Jurriaan Van Rijswijk, chairman of the Games for Health conference (Nov 2012)
Established Factors for Serious Games Success

- Proof that serious Games are effective, especially for education and health
- Foster good level of engagement, immersion and realism
- Promote motivation and social connections
The Cost of Healthcare

“by 2050 the cost of direct health care in just the U.S. for Alzheimer's is going to be $1 trillion. Caring for sufferers of the disease is already a $200 billion market in the U.S.”

Dr. John Harrison, a psychologist at Imperial College, London
Fields of application of Serious Games & simulations in Healthcare

- Supporting therapy, rehabilitation after severe illness
- Self-management of illness /chronic conditions, e.g. Diabetes
- Exergames: supporting physical activity and healthy lifestyles
- Anonymous group therapy
- Preventive medicine
- Behavioural change
- Healthy Nutrition and healthy lifestyles
- Train professionals (procedures, diagnosis, patient monitoring ….)
- Doctor-patient communication
games for health
Medical Staff Training
Nurses and Carers have to cope with a high level of stress in their working shifts. They are trained on the medical side and in procedures, but some support to deal with “challenging behaviour” is needed.
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<td>‘This would have been really helpful when we first started’.</td>
<td>‘The Virtual Tutor is a good support inside the game’.</td>
<td>‘Mini games are really fun and teach me something that seems to be really important’.</td>
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<td>‘It’s really helpful’.</td>
<td>‘I was really immersed inside the game’.</td>
<td>‘Tutor really helps me during the game’.</td>
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<td>‘Mrs Violet looks exactly like Mrs XX and she says exactly those sorts of things!’.</td>
<td>‘The game is really innovative, I like the way patients are distributed inside the environment, the challenges I have to address and the mini games’.</td>
<td>‘The tutor’s feedback, the scores and the learning diary help me to reflect about my game experience’.</td>
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Emergency training in a hospital after an earthquake
MillenniumHospital is an innovative interface to an LMS system. MilleniumHospital is an interactive, gamified 3D hospital where a surgeon can interact with game-based medical content, navigate environments, access e-learning lessons and learn interactively with peers.
Rehabilitation
Extensive investigation of the issues related to long-term physical/cognitive rehabilitation processes and the identification of suitable technical solutions to efficiently support them.

Develop an efficient, effective and engaging virtual rehabilitation environment for home-based rehabilitation to enable elderly people to enjoy high quality rehabilitation for a much longer period than the Health System can currently afford.

Standard hardware components and devices, suitable medical data processing algorithms, personalized and serious-games based rehabilitation pathways, Web2.0 social and communication tools.
Games Based Rehabilitation

- provide exercises and training - based on serious-games - within a personalized, user friendly and engaging rehabilitation program
- offer a cost effective infrastructure with integrated sensors
- collect relevant physical and medical parameters for patients’ status inspection and prevention
- support off-line/on-line management and monitoring of the rehabilitation protocol
- promote patient’s social participation and community building

**Patient’s home:** place where physical and cognitive rehabilitation process can be performed in an intensive and engaging though controlled way, while promoting social inclusion and quality of life.
Games for Health

Game-based exercises to train the upper body
Motion tracking systems.
Scores over times show the degree of achievement
Home environment according to patients’ preferences.
Ability
Active Ageing
A game-based environment designed to promote active ageing by a constructive interaction between mind, body and social engagement.

@DOREMI_FP7
Gamified environment
Prevention
Obesity has become a worldwide public health problem in developed countries.

Over the past 30 years childhood obesity has more than doubled in children and tripled in adolescents.

Motivating teenagers to modify their unhealthy food and exercise habits in favour of a healthy lifestyle promises to be one of the best solutions for preventing overweight and obesity in the younger population.
MyCyFAPP

Cystic Fibrosis: genetic disease with ca 5% mortality in childhood in Europe. Pancreatic insufficiency leading to malnutrition.

The ICT tool includes games to promote healthy lifestyles and combines patients’ empowerment, education and self-management of secondary complications.
Support for impaired people
A serious game to introduce autistic people into a job
Thank you for your attention!

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