



KTH Datavetenskap
och kommunikation

Kungliga tekniska högskolan KTH
School of Computer Science and
Communication CSC
Human Computer Interaction HCI
Stockholm, SWEDEN

Previous collaboration, projects and acquired funding

2007 - 2009 UTE – useful technology/entertainment

Movementbased interaction game (Nintendo Wii/Playstation) within elderly care.

2007 –2009 MONAMI - Mainstreaming on Ambient Intelligence (EU)

Testing assistive technology for the elderly.

2005 - 2006 FAUST - Faust or Disiventing the A-bomb? (EU)

In cooperation Sir Joseph Rotblat, Klesidra and Littlefisch.

A mixed project focusing on responsibility for ones action. Theatre play, discussion panels, interviews with old with reminiscences, work with teenagers on peace and threat and better inventions.

2004 - 2005 INSCAPE -Interactive Storytelling for Creative People (EU) Partner focus on ergonomics in the interaction situation when designing and programming for animation.

2000 – 2003 INTERLIVING Designing Interactive, Intergenerational Interfaces for Living Together (EU)

2001 – 2004 SHAPE Situating Hybrid Assemblies in Public Environments (EU)

The project developed through participatory design interactive mixed-reality installations and exhibitions.

1999 – 2000 ERENA Electronic arenas for culture, performance, arts and entertainment

(EU) The project developed art, performances, exhibitions and technology within mixed and augmented reality.

1999 – 2001 KIDSTORY Developing Storytelling Tools for Children, with Children (EU)



**KTH Datavetenskap
och kommunikation**

Yesterday today and tomorrow...

- Think of the domain as a design of a system where both humans and technology are material.....pieces that together make an action or fulfill the purpose of the design
- Drive a car or a train is now almost only a cognitive skill. There is a minor focus on the motorical skill needed.



my own research/practice

I will present the project within elderly-care using
Nintendo Wii Sports and some research stuff around
design of physical movement...



**KTH Datavetenskap
och kommunikation**

Design of both the services and the quality of our interactive experience



KTH Datavetenskap
och kommunikation

- When designing ICT-tools and system there is also a design of a physical movement that we could benefit from addressing in a more specific way. Both from ergonomics and experience perspective

Game over or play it again and again...



**KTH Datavetenskap
och kommunikation**

- “it is fun - we are having a match almost every day”
- Nintendo Wii Sports - just a game?
- How do we change the healthcare organization to use the resources in FUN?



**KTH Datavetenskap
och kommunikation**

Target group and for what purpose?

- Wii were launched in Sweden December 8, 2006
- A reaction towards the game consols that focused on the graphics.
- Target group between 9 - 15 years old but were said to be a "family game".
- Almost directly gets through the barrier into rehabilitation and elderly care
- Now you can find studies from Canada, USA, Asien and Europa where the Wii Sports has been used as a mean for professional purpose within these domains
- It is giving the elderly care a n arena for equal cooperation and competition despite personal differences





**KTH Datavetenskap
och kommunikation**

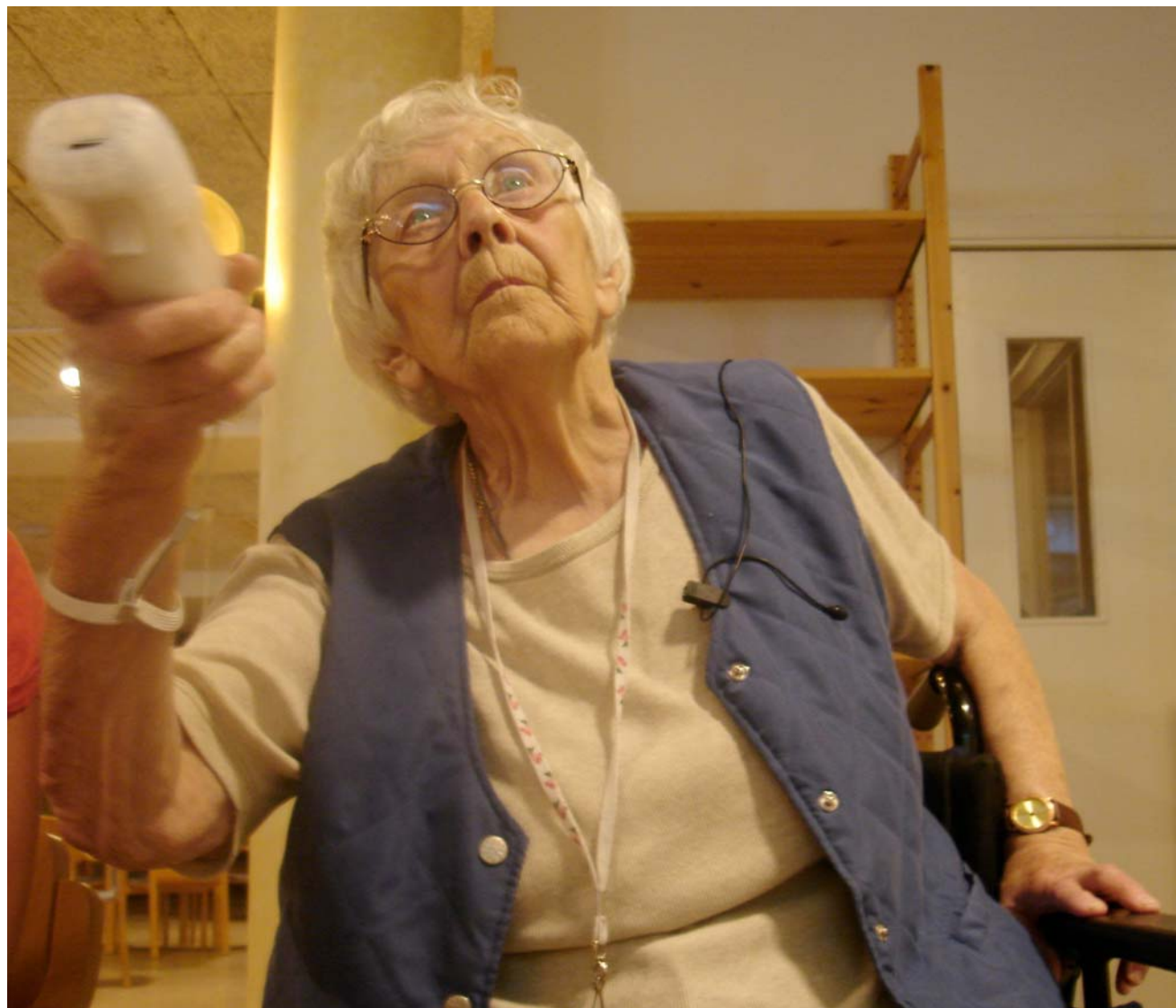


**KTH Datavetenskap
och kommunikation**



**KTH Datavetenskap
och kommunikation**





**KTH Datavetenskap
och kommunikation**



**KTH Datavetenskap
och kommunikation**





**KTH Datavetenskap
och kommunikation**





KTH Datavetenskap
och kommunikation



**KTH Datavetenskap
och kommunikation**





**KTH Datavetenskap
och kommunikation**

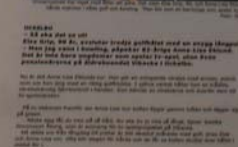
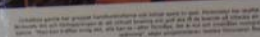


KTH Datavetenskap
och kommunikation





Air 112 S. 112
M. 112





**KTH Datavetenskap
och kommunikation**



Four areas to support health when getting old

- Physical activity
- Healthy food
- Social relations/support
- To be part of/belong to/to have a role to fulfil

(Statens Folkhälsoinstitut R 2005: 6)



**KTH Datavetenskap
och kommunikation**

How can this be done?

- We have ideas about what old people wants do do...
- We have not been able to organize elderly care in a sustainable way - we think we know what old people need and want...



Use the movement

- Joy of movement
- Motion for a purpose not for just checking the range of movement
- Something is at stage - win or loose
- excitement
- On stage
- "In real time" positive stress



Design of the organization

- Care and everyday life
- Sorry but I live on your workplace
- Organization
- Knowledge skills
- Old people yesterday today and tomorrow



**KTH Datavetenskap
och kommunikation**

Helena Tobiasson

Project manager of UTE, (computer game within elderly care) partner in MonAMI (services for elderly persons and persons with disabilities living at home) and PhD Student in Human Computer Interaction with focus on design and physical movements/ergonomics, at the School of Computer Science and Communication, CSC, at Royal Institute of Technology, KTH, Stockholm, Sweden.

Member of the Swedish National Design research school

tobi@csc.kth.se



**KTH Datavetenskap
och kommunikation**