ABSTRACT
This poster reports research to introduce creative problem solving techniques and software to the care for people with dementia in residential homes.

Author Keywords
Creativity; analogical reasoning; dementia care.

ACM Classification Keywords
J.3 [Life and Medical Systems] Health

General Terms
Human Factors

DEMENTIA CARE AND CREATIVITY
Dementia is a condition related to ageing. After the age of 65 the proportion of people with dementia doubles for every five years of age, so that almost one fifth of people over the age of 85 and a third of people over the age of 95 are estimated to be affected [2]. Two-thirds of all residents in care homes have a form of dementia [5], and caring for these residents can pose complex problems. Symptoms vary from person to person, requiring care to be individualized and care staff to think creatively to deliver the novel and effective treatments and support that individual residents need. The EU-funded FP7 Mirror Integrated Project is providing new capabilities to enhance care by offering care staff new forms of creativity training, techniques and software apps adapted to the care domain.

Research in Mirror aims to overcome two challenges in the care for people with dementia. The first is to implement creativity techniques that can support the care for dementia in residential homes effectively. These techniques need to be effective within the constraints that residential care homes impose, constraints such as the low status and limited training of the care staff [1]. The second is to develop new software apps that can support effective creative thinking with the techniques to be implemented in care homes. High turnover of staff means that sharing knowledge about good care practices that we perceive as a pre-condition to effective creative thinking is difficult. Therefore in Mirror we have developed mobile apps that enable care staff to undertake case-based reasoning with previous solutions to the same problem and creative thinking with analogical solutions to similar problems.

INTRODUCING CREATIVITY INTO DEMENTIA CARE
We observed and interviewed care staff in one care home to understand current care practices and introduce creativity techniques and software apps. Data collected revealed three distinct opportunities for creative problem solving:

1. Managing challenging behavior: creative problem solving can be used to analyze data about such behavior to discover its causes then compare with previous episodes of challenging behavior to propose possible resolutions to it.

2. Adapting to an evolving understanding of each resident: the process of understanding residents is not formulaic but requires care staff to react to individual situations, thereby establishing opportunities for creative problem solving.

3. Devising stimulation to residents with advanced stage dementia: creative thinking offers opportunities to discover new forms of stimulation through all five senses for these residents within one major constraint – limited staff time.

CREATIVITY TECHNIQUES FOR DEMENTIA CARE
Six care staff from the residential home experimented with different creativity techniques on a dementia case study, and the technique deemed most interesting and effective was other worlds, an exploratory creativity technique that encourages analogical reasoning in different domains. Its selection recognized the potential for case-based problem solving in the care for dementia [4]. The care staff generated ideas to solve problems analogical to ones encountered in dementia care in four domains - social life, research, word of mouth and different cultures, then transfer these ideas to the care for dementia. The staff then randomly picked a fifth analogical domain from politics, tennis, flying and army [6] and repeated the idea generation process. The success of other worlds can inform work redesign and new forms of training in the pilot care home.

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We are currently extending Carer with capabilities to retrieve good practices from domains analogical to dementia care by extending it with the AnTiQue discovery service [8]. To exploit these new capabilities we are populating the repository with managing challenging cases from other domains in Mirror, such as stroke care, as well as domains external to it such as policing and social care.

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**References**


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