New technologies and applications in the works

Building a forest for aged care

The original rainforest scenario in summer

With sponsorship from a Victorian residential aged care provider, the development of Alzheimer's Australia Vic's interactive virtual forest is on track for a 2015 release, reports **Natasha Egan**.

Listening to a gust of wind in the rainforest, reaching for a passing butterfly and watching the snow fall and turn the tress and ground white is now a reality for a select group of aged care residents with dementia in Victoria.

A dedicated room in four Lifeview Residential Care facilities has been turned into a virtual forest as part of trials of ground-breaking video-game technology.

The Virtual Forest Project, which is an initiative of Alzheimer's Australia Vic, is a sensory therapy application designed to improve the quality of life of a person with dementia through stimulating the senses and allowing them to interactively engage with the forest.

It uses the latest next generation video game technology including Unreal Engine 4 and Microsoft's Kinect to produce a visually impressive experience similar to mainstream video games.

Alzheimer's Australia Vic and game developers Opaque Multimedia Media, which is the same team behind Alzheimer's Australia Vic's award-winning Virtual Dementia Experience, launched the project in May via a crowdfunding campaign aiming to raise $90,000.

The campaign fell short of its goal and the project stalled, but it's now back in development as a result of a new partnership between Alzheimer's Australia Vic and Victorian provider Lifeview.

The two-year deal involves preliminary and final trials of the Virtual Forest Project exclusively in Lifeview's homes in Chelsea, Cranbourne, Keysborough, Emerald, and Wheelers Hill.

Madeline Gall, CEO of Lifeview, says it is important to work with research organisations to bring new technologies to fruition.

"Not only is Lifeview helping to assist Alzheimer's Australia Vic in the valuable work they do in the area of dementia research and support but we are also bringing to our residents this day-changing technology, and giving our staff a better understanding of dementia," she tells *Technology Review*.

Madeline Gall

THE TRIAL

Special technology, including screens and projectors required to operate the virtual forest have been installed at participating homes. Preliminary trials began in October and more will follow in early 2015. The finalised program is due to be rolled out from August 2015.

The trial, which involves testing the technology and equipment in a live environment so developers can see it in action and remove any bugs, will assess how to best to rollout this kind of sensory interaction.

It will also investigate the effects the forest has on residents with dementia and provide feedback to Alzheimer's Australia Vic on the overall experience, thoughts, reactions and demeanour of participants before, during and after entering the virtual forest.

Several residents with dementia at each of the four tests locations are involved along with staff trained to use the technology.

As part of the partnership, Gall says Lifeview staff are undertaking specialist training through Alzheimer's Australia Vic's Virtual Dementia Experience. "This is an extraordinary experience and recent participants have told us it has changed their thinking on the care they deliver to our residents."

Early feedback is encouraging with positive effects on demeanour and communication seen among participants, which subsequently assists staff to better understand a resident's history and connect with them, says Gall.

Maree McCabe, Alzheimer's Australia Vic chief executive, says Lifeview's sponsorship and assistance has brought the project to fruition.

As a result of trials held at three Lifeview sites in late 2014 using the original forest scenario, the team at Opaque Multimedia are now re-working the design.

The final design will be very different to the original, Alzheimer's Australia Vic tells *Technology Review*. TR