



The chair that helps you fly

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Game technology is being adapted to help the less fortunate, reports Roger Highfield

This remarkable chair will allow disabled children to enjoy the fun and stimulation of a computer game in which they can explore virtual worlds, even fly.

The chair will be on display this week at the Science Museum in London as part of its "Future Playground" exhibition to give visitors a glimpse of the interactive technology currently being tested for possible development and use in the video games of the future.

Developed by robotics expert Dr Brian Duffy and the SMARTlab in London, with colleagues in Ireland and France, the chair offers a new interactive experience for children who may be unable to interact with currently available technology, helping with rehabilitation and to reduce stress, but it is fun for any child.



The Active Chair is an individual simulator, or haptic chair, that can move children around with the help of pneumatics, and is currently undergoing trials at the Stephen Hawking School in Tower Hamlets for children with complex disabilities.

Some have little mobility and spend much time lying down. Many cannot speak and the few with some limited speech capability did not speak very often. Some can only track objects with their eyes, but not always consistently.

advertisement But in the remarkable chair they can watch 3D animations on a curved screen to immerse them in a computer generated world. The chair then moves up and down and from side to side, either in response to an onscreen animation, or to buttons and mouth-operated switches.

The 3D personalised screen is an "immersive projection system" provided by Immersive Display UK. This gives the child an ultra wide field of vision to show animations developed by artists at SMARTlab, run by Professor Lizbeth Goodman at the University of East London, and aimed at children aged between eight and 13.

Tests at the Stephen Hawking school earlier this year have been encouraging, after children helped develop a story for the computer game. "I was quite surprised by the response of the majority of children who tried the chair," said Prof Goodman.

One child, who is known to be anxious, "did however take really well to the chair and on his second visit couldn't wait to get in it. The simplicity of the switches was also good for him as he was able to grasp very quickly what he needed to do to operate the chair."

The team says the chair will "empower this group of children (and by extension others like them, or with equally compelling needs) to play and 'fly' like other kids, in creative worlds triggered by their own physical movements, providing movement-based feedback for those who can not

control their own body movements."

The event coincides with the current major exhibition Game On, which examines the history, development, design and future of video games. Future Playground takes place on Monday 18 to Wednesday 20 December 2006 at 11.00-13.00 and 14.00-16.00 at the Science Museum.

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