

Videogaming goes audio: New game lets visually impaired share the fun

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A new computer game developed by MIT and Singaporean students has taken the video out of videogames, making it possible for visually impaired people to play the game on a level field with their sighted friends.

The game, called AudiOdyssey, simulates a deejay trying to build up a catchy tune and get people dancing. By swinging the remote-control device used by the Nintendo Wii, which senses motion, the player can set the rhythm and lay down one musical track after another, gradually building up a richer musical track.

Eitan Glinert, a graduate student in computer science at the Singapore-MIT Gambit Game Lab established by MIT and the Media Development Authority of Singapore, says that the introduction of that Wii controller attracted many women and older players for the first time to the world of videogames. “Lots of people who had never played video games were now playing them all the time,” he says. “I started to think, who's been left out? What groups are left behind even with all the new technology, these new systems?”

Then it hit him. “People with disabilities had been left behind. I began to speculate, how could you bring these people into the fold and have them be able to play these games?” He started by looking up everything that was available in terms of computer games for the visually impaired, and found there were already about 200 titles.

“I thought, oh well, it was a good idea. But then I noticed something: As a sighted player, I was unable to play any of these.” The games had been so specifically adapted for sound and tactile play that they gave the visually impaired too much of an advantage, making it impractical for them to play with sighted friends. “There were games for sighted people, games for blind people, and never the twain shall meet,” he says. “I thought, maybe I could build a game that could be played by both, equally well.”

Working as the first student in Gambit, the Singapore-MIT game lab, with a team of seven other students he developed the prototype for AudiOdyssey in the summer of 2007, and has since been testing it with various groups of players. Since not everyone has access to the Wii controller, the game is also designed to be playable using a regular keyboard.

The game “is an early prototype, it's limited in the things people can do,” Glinert says. “But people seem to really enjoy it.”

Yeo Jing Ying, a Singapore student from the National University of Singapore who also worked on AudiOdyssey said, “Being a game designer on the team, I realize that we need to take care of both the audio and visual aspects of the game as we are targeting both the visually impaired and the mainstream audience. This is a challenge for our team. Since we are making an audio game, we need to make sure the sound is not jarring to the ears as the game is heavily audio-dependent. On the other hand, the visual feedback should be attractive and obvious enough for the mainstream audience.”

Count Alicia Verlager among them. A recent graduate of MIT's Comparative Media Studies program, Verlager, who is blind, helped with the development of the game.

"As a media studies scholar and a blind consumer, I am very excited to see that Eitan and other game developers are working to make games more available to gamers with disabilities, especially when those games can be shared between players with and without disabilities," says Verlager.

"The element I probably most envy about gamers is just the way they hang out together and share doing something fun," she says. "It's the social aspects of Guitar Hero and World of Warcraft that I really want to try myself, and so hanging out with other gamers playing AudiOdyssey was really fun."

AudiOdyssey is available for free download (Windows only) at gambit.mit.edu/loadgame/audiodysey.php .

Source: MIT

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