SpeedyCopter

Game Testbed V1

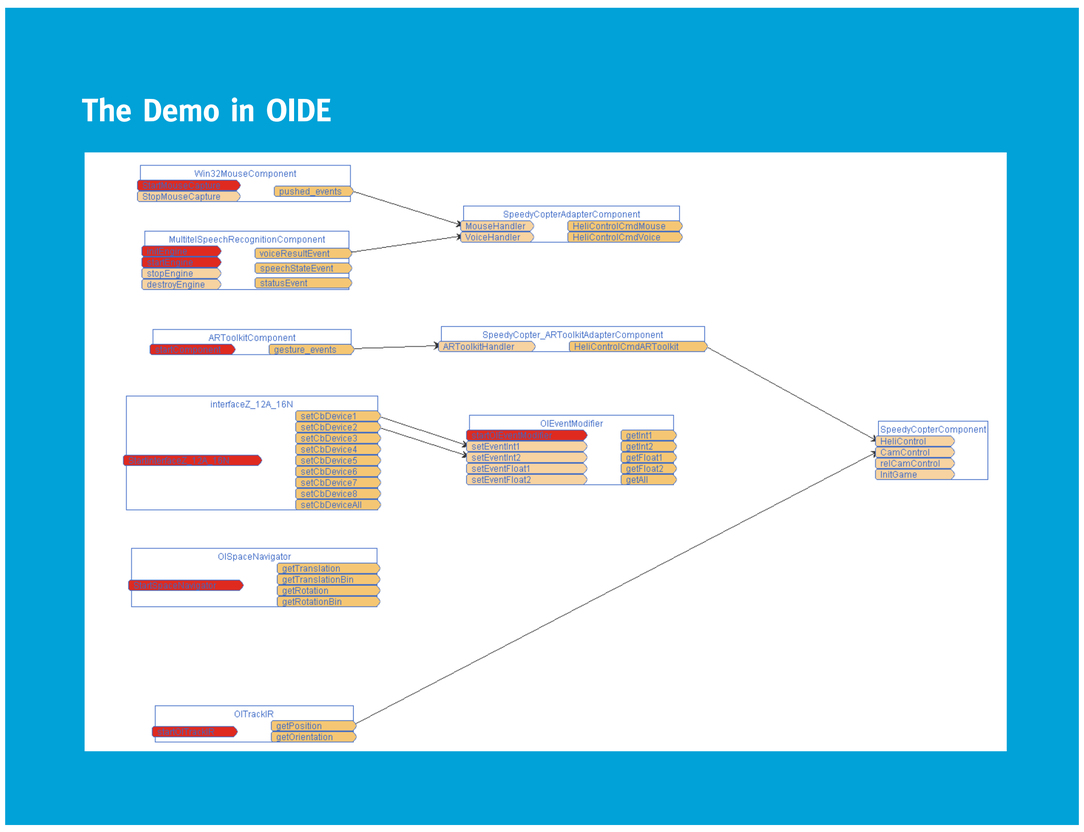
New Gaming Experiences with Multimodality

Motivation

SpeedyCopter is 3D game for kids with the task to fly a helicopter in a virtual city. The objective is to collect as many boxes as possible in shortest possible time. As our first testbed, we used this basic game to test a wide set of modalities, as alternatives but also in different combinations. This test bed serves as a work bench for testing new input devices and components.

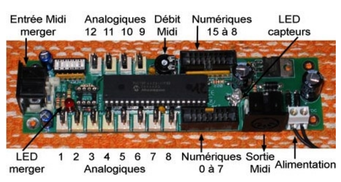
Using the Demo

You can steer the helicopter itself or change the view point. There is no way to stop the helicopter so watch out for the bulidings. Using the trackIR hat moving your head (left/right and up/down) toggles the view points. You either steer the helicopter with SpaceNavigator or use the small interaction devices. Speech recognition allows you to control the speed of the helicopter by saying “stop”, “go” or “fast”.



Modalities

In this demo six devices are used for the interaction: 3DConnexion SpaceNavigator is 6 degree-of-freedom manipulation tool. InterfaceZ is a chipset that provides connections for midi captors, like accelerometers or buttons. TrackIR is used to track head movements. We also use speech recognition, AR toolkit and keyboard / mouse.



Evaluation

We evaluated the game by letting players fly the helicopter using traditional mouse and keyboard inputs and then using the AR tookit and speech recognition as new multimodal interaction techniques.

While the players were having a lot more fun using multimodal interaction they had much more difficulty in steering the helicopter and staying in control. We found that multimodal interaction needs to be defined in detail.

That is why our next testbed version focuses on very common gaming interactions so both players and game designers can study multimodal experiences on a micro level.

Information Society Technologies
OpenInterface STREP FP6-35182

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