

PiNiZoRo: A GPS-based Exercise Game for Families

By Kevin G. Stanley, Ian Livingston, Alan Bandurka, Robert Kapiszka and Regan L. Mandryk

University of Saskatchewan researchers have recently created a multi-touch surface interaction game for persuading families with small children to exercise together. Obesity is a growing problem among children, due in part to their sedentary lifestyles. Time spent engaged in physical activity is decreasing, while time spent playing video games is on the rise. As children of active parents are almost 6 times as likely to be active themselves, the UofS researchers leverage children's interest in digital games to encourage families to engage in purposeful walking together.

The game – called PiNiZoRo – is a GPS-based exercise game, played on an iPhone, which uses walking in the real world as a primary gameplay mechanic. Players, (kids aged 4 to 12), are cast as members of a secret and elite police force tasked with subduing the pirates, zombies, ninjas and robots that have infiltrated their neighbourhood. To find and combat



To read the full article, go to <http://www.nsercsurfnet.ca/pmwiki.php?n=SurfNet.Papers>

these infiltrators, players must follow maps left by others describing a “beat” known to house illegitimate members of the pirate-zombie or ninja-robot alliances. There are two core gameplay mechanics, a navigation game based on moving through the real world, and a multi-touch minigame, which is either

a cop, detective, or spy minigame. There is also a map editor that allows parents and recreation specialists to create custom routes in their neighbourhoods.

Results from an initial focus group with parents were positive, as they showed enthusiasm for the concept, implementation, and gameplay and tests with children are being conducted this summer.

The full article was published in Proceedings of Future Play 2010, Vancouver, Canada.

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Mark Your Calendars

Industry Open House
October 15th
University of Calgary

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Improving Collaboration in Tabletop Simulation Environments

By Andrew Heard,
Nicholas Graham and
Stacey Scott

The Canadian Army currently uses highly complex simulation software called JCATS (Joint Conflict and Tactical Simulation) and OneSAF (One Semi-Automated Forces) to train officers in making strategic decisions and controlling groups of people. For example, the "Winged Warrior" simulation trains commanders of helicopter squadrons prior to deployment in Afghanistan. In this simulation, 150 helicopter crew members and staff officers undergo training in a realistic mission, while 80 "interactors" (typically retired officers now working part-time for the Canadian Forces) guide the simulation behind the scenes. The simulation software provides a map, where interactors use a mouse and keyboard to move units and perform combat actions. Interactors require considerable training in order to effectively use the JCATS and OneSAF systems. Since each interactor has his own PC,

collaboration is awkward.

Researchers from Queen's University, Dr. Nicholas Graham and Andrew Heard (NSERC USRA student), are collaborating with Dr. Stacey Scott of the University of Waterloo and Doug Brown of the Army Simulation Center (ASC) in CFB Kingston to make simulation tools like JCATS and OneSAF easier to use.

The Equis Army Simulation shows the battlefield on a map projected onto the top of a conference table. Interactors can move tanks and soldiers by simply dragging along the desired path of travel on the map. The map can be panned in any direction using swiping gestures with an Anoto pen and can be zoomed in or out using a context-based menu shown by touching a pen on the table. Interactors



sit around the table, and can all interact with the system concurrently. The proximity of the tabletop setting makes collaboration natural.

The researchers plan to evaluate this tabletop software with ASC personnel, using simulated scenarios similar to those already used to train officers. This will help determine the effectiveness of digital tabletops as interfaces to complex simulation environments.

Upcoming Event

This event will be held at the University of Calgary.

- **Industry Open House**

October 15, 2010. For all SurfNet members, industry partners and the general public. Please join us for a keynote address followed by brief presentations and demos that will showcase the future of multi-touch displays, digital tables and multi-display environments. More details to follow in the September newsletter.

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Research in Review

Please see our website for full articles and videos or, click on the titles below.

- ***The NiCE Discussion Room: Integrating Paper and Digital Media to Support Co-Located Group Meetings***

By Michael Haller, Jakob Leitner, Thomas Seifried, James R. Wallace, Stacey D. Scott, Christoph Richter, Peter Brandl, Adam Gokcezade and Seth Hunter
(<http://www.nsercsurfnet.ca/pmwiki.php?n=Blog.NiCE-Meeting-Discussion-Room>)

- ***Proxemic Interaction: Designing for a Proximity and Orientation-Aware Environment***

By Till Ballendat, Nicolai Marquardt and Saul Greenberg
(<http://www.nsercsurfnet.ca/pmwiki.php?n=Blog.Proxemic-Interaction-Designing-for-a-Proximity-and-Orientation-Aware-Environment>)

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