

# Sim-Suite

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## ABSTRACT

In this paper, we describe the installation *Sim-Suite* which engages members of the public through interactive experiences based on everyday play strategies and basic full-body human movement. The underlying concept of *Sim-Suite* explores a recombinant approach to cultural understandings in regards to the social practice of play and embodiment. Our approach deploys digital technologies to facilitate human-to-human tangible interaction using common materials and objects. In this context, the experience of the physical world is expanded and reconfigured together with the transient virtual space of play and digital media.

## ACM Keywords

Creative Digital Media, Interactive Art, Interaction Design, Embodied Interaction, Games, Tangible Interaction

## ACM Classification

H.5 Information Interfaces and Presentation; H.5.2 User Interfaces (D.2.2, H.1.2, I.3.6); J.5 Arts & Humanities

## General Terms

Design, Performance

## INTRODUCTION

*Sim-Suite* is an interactive stand-alone installation for the public that comments on our conventional assumptions of games and digital space in the context of embodiment and social play. Long before computer technology acquainted the public with digital virtual space, games engaged players in the temporary, spontaneous and imaginary space of game-play [2]. This space created by game-play represents an integral part in establishing the cultural dynamics of mundane social engagement [1]. Games are part of ancient human history where the established ‘virtual’ space of play has colonized peoples’ manners of embodied interactions, distilling them into universal social conventions. Historically games are part of childhood experience across cultures, teaching us to cultivate and evolve our ability to formulate communication routines through the influence of cultural understandings and the dexterity of the body. For example, young children develop visual-motor and social skills by learning how to catch a ball and play ball games with others.

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In the current age, childhood experience incorporates the virtual space of an evolving digital culture that abstracts, fragments, dissolves, and recombines furthermore existing cultural notions with technological achievements. Digital space is tied to the immateriality of information which, in the process of becoming embedded in a global culture, has sacrificed the physicality of the body and replaced it with the current stage of technological achievement [4]. As these achievements mature and digital culture evolves, the body rematerializes in novel ways on a continuing path of shared language in everyday social engagement. *Sim-Suite* mimics and explores these cultural notions by hybridizing habitual human movements with familiar forms of play and bringing them together in a multimodal system.

## ENGAGING WITH SIM-SUITE

*Sim-Suite*’s play is derived from cross-cultural gaming conventions known from everyday board and street games such as Hopscotch as well as abstract, roll and move games like Go and Monopoly. It recombines these conventions and interfaces them with an innovative and unexpected approach to tangible interaction using wobble-boards.



**Fig 1. Three members of the public engaged in playing *Sim-Suite* at a festival**

The idea of tangible interaction had its inception in the mid nineties and has since developed in diverse directions. There are three broad categories from which tangible actions can be addressed: expressive-movement, data-driven, and location-space [3]. The installation described in this paper falls into the expressive movement category with a focus on perceptual-motor skills, which is the perception of the senses in conjunction with the acting body. *Sim-Suite* builds on the human expertise of stepping, walking, and

balancing movements, yet these recombinant elements solicit new ways of experiencing postural dynamics in a playful situation. By using everyday human motion and mundane gaming elements we aimed at making *Sim-Suite* accessible to the public at large.

To play *Sim-Suite*, three members of the public step onto sensor-enhanced wobble-boards which are housed inside a timber platform. The participants stand in close physical proximity to each other, and are facing each other while forming a triangle in space. In the centre, placed inside a timber platform, is a large screen display. Participants manipulate the displayed real-time graphics by interacting with these collectively. Each participant is represented by a unique graphic token which he or she controls using stepping and balancing movements (Fig3). The objective of the game is to be the first one to have created a pattern by placing his or her tokens into a specific formation. In the course of the game the participants must resolve ‘a conflict of interest’ situation which requires the individual to continuously engage with movements on the wobble-board while maintaining the stationary position of their token in the game. The participants must resolve this challenge by devising their pattern of movement.

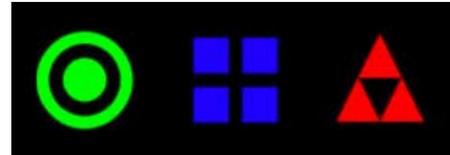


**Fig 2. Timber frame for wobble-board under construction.**

### Sim-Suite’s concept and creativity

In its simplicity, *Sim-Suite* demands creative commitment from its participants. The creativity of the participant emerges from the embodied engagement by way of adapting and improvising via individualistic and idiosyncratic movements in the pursuit of navigating through virtual space. In this context the participants move from being players to being live performers whose movements constitute a meandering act between playing and dancing. The perception of this play- dance dynamic is equally accessible to the participants as to the members of

the audience, allowing for a shifting focus between attention on game-play and the poses in motion performed by the participants. Similar to the concept of the magic circle in play, *Sim-Suite* is arranged so that participants and audience are facing each other in a circular manner where the audience is spatially integrated by naturally standing in a deliberately designed space (Fig. 1).



**Fig 3. Each player is represented by one of these tokens.**

The concept of *Sim-Suite* extends furthermore in the use of materials. Primarily made from timber and other everyday objects such as bedsprings (as shown in Fig. 2), the digital devices that drive the game, such as sensors and screen display, are exposed and visible only where necessary. The intention here is to re-create the richness and sensuality pertaining to the everyday physical world and, at the same time, preserve the illusion associate with the virtual. Thus, the participants as performers are able to generate a full-bodied sound when interacting with each other. The sound is generated from the interface through the clacking of wood surfaces against each other, which is reminiscent of drumbeats, and is accented with in-game virtual sound effects equally generated by the participants via game-play. This furthermore stresses the intent that engaging with *Sim-Suite* is based on human-to-human interaction where the computer operates in the capacity of facilitation or mediation ‘behind the scene’.

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