Big Huggin’: A Bear for Affection Gaming

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Abstract
Today the world of human computer interaction is an impersonal one. It is one where touch is mediated through glass and plastic. Where multi-touch means antiseptic sleek materials with little texture. Why isn't touch more personal? Why isn't touch more tactile? Big Huggin' is a game played with a 30 inch custom teddy bear controller. Players complete the game by providing several well-timed hugs. It is an experiment and gesture in alternative interface. Instead of firing toy guns at countless enemies or revving the engines of countless gas guzzling virtual cars, why not give a hug? The Big Huggin’ game is designed to offer reflection on the way we play and the cultural benefit of alternative play.

Author Keywords
Affection Games; emotional game design; alternative game interfaces; critical gameplay; cultural gaming

ACM Classification Keywords
K.8.0 [Games]; K.4.2 [Social Issues]

General Terms
Design, Documentation, Experimentation, Human Factors
Background
The history of human computer interaction is largely an impersonal one. Although computers keep our secrets safe and hold our personal information, we rarely interact in personal ways with them. Perhaps because of its history in science and business, the computer interaction is largely a formal one. Interactions are mitigated through devices whose form follows function. We work with computers through buttons and clicks. More recently we have moved to gestures [1], which often resemble the semaphore systems of nautical communication more than the casual body language of conversation.

While this is practical in the formal environments of computing, it is more surprising in entertainment computing. Entertainment computing is not a formal environment. It is a place where our actions or game verbs are casual. The contemporary computer game is a place of instinctual reaction and gut response [2]. It is a space in which players have been given the opportunity to mimic war through toy guns [3] and demonstrate strength by hitting punching bags [4].

As researchers it is important to ask questions about the evolution of these interactions in order to understand where such HCI will evolve. The generally accepted history of computer games begins on the midway [5] of carnivals and related venues. The physicality of pinball machines, slamming hammers and ringing bells, evolved into the modern arcade game [6, 7]. The midway was an environment in which feats of strength and dominance won the attention of onlookers, including potential mates. But this was also the space in which fun houses and evening strolls inspired couples to embrace. It was environment in which stuffed animals were won and hugged as mementos of achievement and affection.

As the midway evolved into the arcade, the joystick and button dominated the interaction standard. Game verbs were physical, but impersonally physical. Players could direct characters to move, jump, or shoot for example. With the increased adoption of simulation, the joystick and button interactions were augmented with toy objects that felt more like the real thing. Virtual steering wheels became real toy steering wheels, virtual guns became toy guns with vibrating feedback and realistic sounds.

Concurrently, researchers sought to understand how emotion could increase the quality of play experiences [8]. The bulk of these efforts were spent on development of story and the production of on-screen representations of self. The goal was to help the player identify with the on-screen player characters.

Through all of these developments there has been little attention into affection as a communicable action. Although games have been produced of a sexual nature, few seek the opportunity to express general emotional affection [9].

The research presented here seeks to explore a simpler space of general affection. This research does not endeavor to change the world of game interfaces. Instead, it seeks to remind players of an ignored play system. The notion is simply to allow players to hug as their only game verb. The hug stands as metaphor for providing support, courage, and inspiration.
The Hug as Game Verb

How a society chooses to entertain itself unravels a narrative about its values and its opportunities. Play is generally regarded as an educational activity [10]. Play is practice for what may come and a space in which to test boundaries [11]. The bulk of play provided in the digital space is not affectionate. It is physical. Many game verbs are centered on actions achievable in real space, such as moving and hitting.

The affectionate physical expressions of kissing and hugging are noticeably absent in digital spaces. Given that children regularly express emotion as part of play, it is surprising to witness this dearth of affectionate play in computer entertainment. The importance of expressing emotion through hugs, for example, is proven important in prosocial psychological development [12]. Just as players have embraced virtual guns and virtual tennis rackets, this research seeks to highlight a noticeably absent kind of interaction. The hug as play gesture.

Through several western cultures the hug is a gesture of affection or support. Hugs are given as greetings. They are provide to old friends, family, lovers and loved objects. A hug is fundamentally qualitative, with a wide spectrum of qualities. It is a gesture of balance. Too much hug is as awkward as too little. In human-human interaction, the action is shared, as when two people hug, both are giving and receiving. It is also a gesture with action and consequence. It motivates. It inspires. We even hug the object of safety when we are scared.

This project combines the history of arcade game interaction with the social critique of Critical Gameplay [13]. It describes an implemented game in which players hug a large teddy bear to aid a virtual avatar through obstacles.

Implementation and Design

This game system is comprised of two basic parts, a digital computer game and 30” stuffed animal as controller. The first is an on screen platform scrolling game whose player character is a teddy bear. The game’s prototype is controlled by a stuffed animal manufactured by WMDREAMZ. The stuffed bear has been fitted with a set of analog buttons. When a player hugs the bear the buttons are pressed. The more complete the hug, the more buttons are pressed. Every time the player hugs the teddy bear, the bear’s digital avatar deals with an adversity. The player character response depends on the adversity. If there is a hole or boulder in the digital bear’s way, the avatar will jump.

The game, in figure 1, is designed around a simple set of challenges. In the first three levels, the player moves through a verdant, space, hopping over rocks, skipping through rivers and avoiding holes. In the second set of levels, the player must make it through a cold, snowy landscape. The player character must surmount snow banks, and avoiding falling. In the final stage, the player must move through a semi-urban landscape where the obstacles may thwart the bear’s success.

The bear controller is connected to a standard Microsoft Windows 7 computer through USB. The remaining interactions are managed through the game software. Hugs are registered and evaluated for their balance of force and appropriate length. Players must manage their hugs, balancing letting go with varying hug
intensity. Play is light-hearted and progressively challenging. The game is designed around a simple sentimental message. A hug might just be enough to make it past life’s obstacles.

Future Work
This project is largely designed as a demonstration of potential. As with other Critical Gameplay games, the researcher acknowledges the potential for such play to aid in treatments. Specifically, future research into the ability of this game to help autistic children develop pro-social behaviors has been considered.

Conclusion
This project endeavors to demonstrate the opportunities in alternative play provided through a revision in the way games are played. It combines the history of arcade games with experimentation in creating emotion in games. It attempts to bridge the gap between affectionate play and computer entertainment. It does so by combining the iconic giant teddy bear given as a prize on the midway, with the gesture of hugging to accomplish tasks. The research seeks to critique play conventions by demonstrating alternative ways to play.

References