A Potential Future for Games: Appropriated Interfaces

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Abstract

The video game industry has long been on the forefront of bringing novel interaction technologies to the masses. Recent trends, however, make it difficult to see where the future of game interaction is heading. One of the biggest problems facing games with novel interface technologies is finding audiences. By its very nature a novel interface creates potential barriers for new players. The new game interfaces that will be successful going forward will be those that are minimally intrusive and appropriate the technologies that players already possess.

Author Keywords

Video Games; Game Interfaces

ACM Classification Keywords

K.8.0. Personal Computing: Games

Introduction

The video game industry is in the midst of some very interesting trends. The current console generation is now starting to come to a close, though not before leaving advanced motion tracking technologies in the hand of millions of people [3]. The concept of the micro-console has come promising cheap and open Android based devices in our living rooms [2]. The rise of community platforms such as Kickstarter and Steam

Greenlight have brought game players closer to game makers, allowing for greater risk-taking in the design of new and innovative play experiences [1]. While all of these trends are encouraging, they leave open the question of how the playing of games will change going into the future.

One of the biggest challenges facing future game developers is that of fragmentation. The way one interacts with the Microsoft Kinect is completely different from how one interacts with the Nintendo Wii, and that is different still from how one interacts with a more traditional gaming system. While many of the game interface innovations of recent years have enabled new and engaging experiences, they have also siloed those experiences by requiring the use of specific technologies. The games that are likely to succeed in the future are those that are able to appropriate the technologies that already pervade our lives.

Appropriated Interfaces

In designing games that appropriate our existing technologies it is helpful to think of how our everyday technological interactions are playful. In his book, The Art of Game Design, Jesse Schell provides a prototyping tip to "build the toy first" [4]. Starting from the perspective of a game's core interaction as a toy can be useful because it seeds the design process with something that is already fun to play with. Basing design off of an existing artifact also provides a useful set of constraints, which can guide design.

Another benefit of designing games around appropriated technologies is the potential to leverage a player's existing familiarity with that technology. This allows for game designers to avoid the initial learning curve of how to manage a game's interface before learning the rules of the game itself. However, this can serve as a double edged sword if the design of the game's interaction seeks to break existing norms of use.

Another of restricting designs to appropriated game interfaces is that it maximizes potential accessibility by not requiring players to have access to a technology they might not otherwise possess. This is colloquially referred to by some as the "no funny hats rule," meaning that a game, or interface, should not require some technology or faculty of the player than what they already have. This is a tenant of minimalist design, and helps to further narrow the design process.

Appropriated technologies are, of course, only one of many possible futures for game interfaces. As the HCI community continues to push the boundaries of our interactions with technology it is the role of game designers to envision the possible ways we will play with our new toys.

Skills

My primary roll on a game development team is in programming, though I generally work more with logging and player analytics. I am highly familiar with the Unity game development environment. I also have strong ability with the Java programming language, both for Desktop and Android, as well as experience with the LibGDX (www.libgdx.badlogicgames.com) game framework. I also have some experience with Flash ActionScript 3 particularly the Citrus Engine (www.citrusengine.com) game framework, as well as some Arduino programming experience.

Biography

Erik Harpstead is a second year PhD student at the Human-Computer Interaction Institute (HCII) at Carnegie Mellon University. Harpstead's work focuses on developing authoring tools for educational software including educational games and intelligent tutoring systems. He is currently a member of the DARPA ENGAGE project (http://www.etc.cmu.edu/engage/), where he works between Carnegie Mellon's teams at the Entertainment Technology Center and HCII to develop better methods and tools for measuring learning in educational games for early elementary students. Harpstead received his BS in Psychology from Illinois Institute of Technology.

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