EDI TO RIAL PREFACE

The Disappearing Act

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Digital games and simulations have undergone major changes since this journal was first issued in 2010. In the course of five years video games and simulations have changed, as has computing in general. Devices have become smaller, while screens have become bigger, and voice and touch sensitive; Internet access is everywhere, and sensor networks are common in most places, and most objects; and unknown to us, large parts of our lives are now enhanced by computing. Much of this comes from knowledge and technology transfer from games and game development.

One could look back to the studies by Nass and Reeves (1996) in their work “The Media Equation: How People Treat Computers, Television, and New Media Like Real People and Places” showed a preference for interaction with machines, objects, and services that exhibit some form of intelligence, feelings, and personality. Video games have provided a model for software interaction and feedback.

Not only are the lives of humans enhanced by computers, but devices have emerged that allow house plants to use twitter with then they need watering, and even tablet games for animals. More and more the design of everyday things includes the capacity for computer processing, storage, and communication.

Sensor networks are built into devices that can do anything from managing food in a refrigerator, to informing your house that you have guests, and perhaps that someone is feeling cold. We have begun our entry into an age where computers and devices will provide services without disturbing you. Objects and software have become more “people-centric”, where the technology has receded into the background (VanHemert, 2014):

What does this mean for games and simulations?

This movement is important to consider when it comes to games. New technologies have begun to surround us as the Internet of Things (Mattern & Floerkemeier, 2010). Games and on-demand entertainment seem to be on the rise with greater access. Even driving is becoming different. With the recent policies mandating vehicle-to-vehicle communication, the automobile is going to potentially become a software-
driven transportation experience, rather than a driving experience. Additionally, feedback from activities like driving may provide data analysis feedback, such as rewards for safety, economy, and courtesy.

These are definitely exciting times. As artificial intelligence becomes more prevalent, activities that required specialized knowledge, training, and tools are now available to novices to perform with ease, games and simulation will continue to filter into our daily lives, perhaps offering new methods of collecting data, communicating data, organizing data, and telling stories with data. Games have provided greater accessibility through user interface, insight into human engagement and motivation, as well as methods for artificial intelligence as machine learning.

With all of these areas of growth, it is our intention at IJGCMS to continue to publish research on video games and computer simulations, but also to examine the ways video games and computer simulations cross into new areas. Emerging areas of special emphasis for the journal will include the growing field of User Experience Research, the use of games in non-gaming contexts, and how games and simulations evolve in terms of entertainment, human learning and behavioral change, and data collection.

I hope you will enjoy reading the articles in this issue as much as I have. Our first article comes from Dr.s Turkay and Kinzer on the effects of avatar-based customization. This article explores the ways that the avatar, or representation of a game player in a game, influences behavior. In this article they examine how games allow players to explore themselves in alternate ways in imagined worlds. They explain that player identification with an avatar—how the player is represented—is an important part of gameplay experience, and has been shown to affect enjoyment.

In an invited article, “Quantifying Magic”, Dr.s Fisher, Nichols, Ibister, and Fuller from the Microsoft Studios User Research Team (SUR) share insights from the growing field of user experience research. The article shares outcomes from research conducted at Microsoft Studios on the development of the Kinect. The Kinect is seem familiar at this time, and this may be because of the success of the SUR on making the Kinect easy and fun to use. According to the authors, the Kinect was designed to expand the technical capabilities of motion gaming. In many ways, this is an evolution of gaming where the user is not dependent upon a peripheral device like a controller. With the Kinect games and media are controlled through vocalization and gesture.

With this article, we are given insight into the work of the Microsoft Studios User Research (SUR) team, and their role in creating the first full-body gaming experiences for the Kinect system. They describe outcomes of internal research for the development of Kinect. They present the work that took place more than 3 years prior to its initial launch and describe the method and practice SUR has created for working with game designers, programmers, and hardware developers on games and other applications that use Kinect. In this article the authors leverage data SUR has collected over the development cycles of many different games created for many different audiences to summarize the unique user experience challenges that the Kinect sensor brings to game development, and present those challenges as insight for future design and development.

Another area of growth has been the rise of the Gamiceutical (Dubbels, 2014). The use of games as medical interventions is a growing field; and with the validation of plasticity, we have begun to see the value of low intensity, high duration training presented as games. As an intervention, games can become the prescription. A new industry has come about as Gamiceuticals. This application of game technology begins to integrate the rigor demanded of medical trials to provide evidence that games can change not only the way we engage with the world, but that they can change us physically.

In the article by Dr.s Patel, Lin, and Khaideri, we are introduced to the use of games as a component of rehabilitative therapy for improving vision. The authors identify one of
the main issues to be addressed in gamicu
ticals, namely that there has been limited game
development that integrates the explanatory
mechanisms described in psychophysical re-
search for repetitive gaming as rehabilitative
therapy. Without an explanatory mechanism,
there is no method for conducting a training
effect, linking the game to outcomes.

In this study, the authors created a game
to look at the potential to improve vision with
a game to improve hitting a ball in baseball.
They grounded their study in vision research,
building their variables around the psychophys-
ics of vision. Specifically they target research
that has shown that repetitive stimulation of
the parvocellular system shows promising
preliminary results in improving vision related
to batting performance. To examine this, they
embedded a homerun derby style baseball
game with a contrast threshold test, to stimulate
parvocellular retinal ganglion cells.

In article five, the author examined the use
of the driving game as a means for examina-
tion of distracted driving. Results from the first
pre-test, post-test experiment indicated that
those who were driving distracted (texting or
talking) in a video game driving simulator had
significantly more crashes, speed violations, and
fog-line crossings than those in a non-distracted
driving control group. These findings are consis-
tent with predictions from the ACT-R cognitive
architecture and threaded cognition theory. A
second experiment manipulated the original
protocol by establishing a non-distracted
baseline for participants’ driving abilities as
a comparison. Results demonstrated that this
manipulation resulted in a significantly stronger
change against intent to drive distracted than
in the original procedure. Implications from
both experiments can help to inform driving
safety programs on proper protocol for the use
of game consoles to change attitudes toward
distracted driving.

Along with our theme of user experience
research, article six explores methods from
user experience as applied to board games. As
user experience becomes more of a mindset
and the methods extend beyond marketing,
Dr. Barbara assesses the suitability of using a
questionnaire, developed for digital games, for
use on board games - thus providing a common
measure of user experience between board and
digital games. The study involved play test-
ing a themed board game with undergraduate
computing students and alumni, measuring
user experience via the Games Experience
Questionnaire whilst testing for reliability and
validity. Findings obtained high scores in both
criteria, suggesting that the GEQ is a suitable
tool to measure user experience in board games
and thus a valid candidate for comparing game
design across varied game media such as digital
and board games.

To close our issue, we offer a review of
Dr. Kurt Squire’s *Video Games and Learning.*
According to the book reviewers Dr.s Pleasant
& Ritzhaupt the book is composed of Squire’s
extensive studies and experiences in the plan-
ning, development, assessment, participation
and integration of games for learning purposes.

The central focus of the book asks, “why
study video games?” Squire takes the position
that studying games can contribute enormously
in the educational pursuit of reaching the digital
age student. Squire agrees that games have a
unique potential of teaching and learning unlike
any other medium. Squire believes that play
enables the intellectual and social growth of the
participant over the long term and permeates into
his or her learning repertoire. He believes that
content, overlapping goals, continuous problem
solving, social interactions and gaming cultures
are critical aspects of learning through games.
Squire proclaims that “any time that we turn a
child off to learning rather than awakening their
intellectual curiosity, we’ve failed” (Squire,
2011, pg. 15).

According to the reviewers, Squire states
that the ability to identify and develop a good
educational game is vital if a student is to remain
engaged, excited, interact, problem solve and
learn simultaneously. Squire articulates several
criteria to support the development of good edu-
cational games. These criteria include: games
must be a collaborative work of both designers
and educators; they should be entertaining and
academically accurate; they should be both fun and insightful; they should be sophisticated, proven design techniques; the games should provide social networks, group interactions, pique interests and inspire creativity.

In close, I want to announce that Dr. Rick Ferdig for blazing the trail for this journal. Rick created this journal, and provided a new direction for game studies. At the founding of this journal, there was very little peer-reviewed research on games and learning. The creation of this journal offered a venue for scholars publish peer-reviewed studies.

When the journal was founded in 2008, our Editor in Chief Dr. Richard Ferdig presented five guiding principles for the journal: quality and rigor, an interdisciplinary focus, an international perspective, innovation, and implications. These five principles serve as a locus for expanding the study and research of games across disciplinary boundaries—you will find these five principles at work in the authorship and the work of our reviewers in this and future issues. Rick will continue on with us as Editor in Chief Emeritus, and will continue to influence our direction into the future. It is my intention to carry forward these principles, even as the landscape for games and simulations is shifting both virtually and otherwise.

I hope you will enjoy the reading the articles.

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IJGCMs