

## **ROBERT F. NIDEFFER - Self-Statement**

Online at: <http://nideffer.net/promo/>

### *Appointments*

Dept. of Studio Art, '98-Present (100%)

Dept. of Informatics, '99-Present (0%)

Director, Arts Computation Engineering Graduate Program (ACE), '07-Present

Co-Director, Arts Computation Engineering Graduate Program (ACE), '05-'07

Director, Game Culture and Technology Labs, '99-Current (SotA), '02-Present (CallIT)

Affiliated Faculty, Visual Studies Program, '00-Present

### *Summary*

This file primarily documents the last two years (7.1.05 - 9.30.08) of my employment at the University of California, Irvine. It has two major sections "Research" and "Teaching and Service." Each section also includes brief review of select work done prior to the '05-'08 time frame as part of my career overview in consideration for promotion to Full Professor.

Currently I serve as Director of the Arts Computation Engineering (ACE) Graduate program (<http://www.ace.uci.edu/>, <http://www.editor.uci.edu/07-08/arts/arts.1.htm#gen1>), as well as the Game Culture and Technology Lab (<http://ucgamelab.net>), and a related academic Concentration in Game Culture and Technology housed between the Donald Bren School of Information and Computer Science, and the Claire Trevor School of the Arts (<http://www.editor.uci.edu/08-09/ics/ics.2.htm#gen3>).

## **I. Research**

For more than fifteen years I've pursued my work from within the framework of a critical socio-technical arts practice. I'm centrally concerned with the relationship between art and design (content), technical implementation (context or infrastructure), and the cultural impact resulting from the dissemination of those technologies to a broader public. A significant portion of that activity has been spent developing interdisciplinary projects and initiatives related to the topic, broadly conceived, of game culture and technology.

### *Early Works: '93-'02*

My first major media work (and the one which inspired me to pursue an MFA in order to focus on computation and the arts shortly thereafter), was my Ph.D. thesis in Sociology entitled *Bodies Nobodies Antibodies at War: Operation Desert Storm and the Politics of the Real* ('94). The dissertation analyzed mass media representation of the 1991 war in the Persian Gulf, and authored as an interactive CD-ROM (<http://proxy.arts.uci.edu/~nideffer/BNAatWAR/>). It was a critical response to a popular

and academic discourse that had an overwhelming tendency to claim Operation Desert Storm heralded a new era of high-tech combat that served only to remove us from the horror and reality of war, functioning instead as a "prime-time video-wargame." From this position, war, both in terms of its mediation as well as its waging, was no longer "real." While there was some merit to that claim, I tried to take a more nuanced position, and assert that the media strategies and new technologies being used to wage war represented a new type of reality, and was just as "real" with just as much consequence as any prior war effort. I argued that it was our responsibility to learn how to more effectively engage this new reality if we wanted to more effectively politically mobilize against it. My practical goal was to produce a media analysis that actually incorporated the range of media through which the phenomenon was experienced – thus moving from the standard of a purely textual analysis, to one that included image, sound, video, search functionality, marginal notation, interactivity, and game mechanics reflective of the topic being addressed. Every text referenced in my writing was scanned in and made part of a query database (well over 2,000 pages), as was every image, video, and sound segment. Several commercial and shareware games were incorporated (and fully playable) as well. When completed, it was reported on various television network affiliates as the first interactive CD-ROM submit for a Ph.D. in the social sciences.

Concurrent to my dissertation work, I co-founded and edited an electronic journal called SPEED ('93-'97) with my colleague Benjamin Bratton (now at the Department of Visual Studies, UC San Diego). SPEED ([http://proxy.arts.uci.edu/~nideffer/\\_SPEED\\_/](http://proxy.arts.uci.edu/~nideffer/_SPEED_/)) was one of the first online social science/humanities journals providing a critical forum for the investigation of technology, media, and society. In addition to co-editing, I also was responsible for design and technical implementation. I first implemented SPEED as a Gopher site in '93, and then migrated it to the Web in '94 with the advent of Mosaic, the first publicly released Web browser. Between '93-'97, four annual issues were produced: "Myths of Electronic Living," "Science and Re-Enchantment," "Airports and Malls." and a special issue devoted to the work of French architect, military historian and media theorist Paul Virilio. The goal was to provide an open-ended architecture, where text, image, and sound based materials could successfully marry form and content in an online journal environment. SPEED received numerous awards, including being chosen in March 1997 as one of the "top 100 Web sites of all time" by *The Net Magazine*, where it was also the top pick in the "Humanities" category.

Several other projects are also worth briefly referencing, as each of them played a significant role in shaping much of my future work. During '96-'97 I served as project manager and art director for an interactive CD-ROM entitled *Life in the Universe with Stephen Hawking* (<http://proxy.arts.uci.edu/~nideffer/Hawking/>). This collaboration with the noted physicist, who visited Santa Barbara frequently to work with colleagues at UCSB's *Institute for Theoretical Physics*, catalyzed interaction with many other parts of the UC Santa Barbara campus research community. In order to educate ourselves about the complex ideas related to cosmology, biology, mathematics, and many other domains of science, we would hold evening lab sessions where guests would come and brainstorm, helping to educate us about how best to represent many of the ideas Hawking

addressed in the lecture, and which we were tasked with translating into an interactive educational experience. Exposure to this interdisciplinary activity, and the rewards that came of it, was key in extending my interest and ability to establish ties to research areas outside the domain of the arts, as well as my interest in scientific visualization and informal science education.

My work on the Hawking project led directly to my being hired by the departments of computer science and engineering at UCSB to lead a small (3 person) team as part of the *Alexandria Digital Library Project* (ADL) in '97-'98. ADL was one of the first half-dozen NASA/NSF/DARPA funded digital libraries projects. ADL's focus was geospatial data, and developing new search and retrieval methodologies for linking textual information to point locations on a map. Much of the core research in those domains was spread across campus, quite difficult to integrate, and even more difficult to provide public access to. In fact, the research had begun "pre-web." I was hired in the final 18 months of the first round of funding. My job was to create software tools that could provide a public interface to the sponsored R&D effort to better position the team as we worked to secure second round funding (<http://proxy.arts.uci.edu/~nideffer/ADL/tutorial/tutorial.html>). This large-scale effort (~\$6+ million in round one, and another \$6+ million in round two) allowed me to educate myself in areas that were of core concern to the computer science community, such as networked media delivery, search and retrieval methodologies, online collection building, usability and interface design, and many others. As a result of this work in round one, I was invited to author the visualization component of the second round proposal, and was credited as Co-PI. However, soon after the grant was awarded I started my position in Studio Art at UCI, and decided to no longer formally participate with ADL. Nevertheless, many of the issues I investigated while involved with ADL found their way directly into my own creative activities.

Toward the end of the digital library work in '99, I was invited to formally participate in *Cracking the Maze*, one of the first game art related exhibitions curated exclusively for an online audience (<http://switch.sjsu.edu/CrackingtheMaze/>). The theme of the show was the game "hack," "patch," or "crack." In this context the crack becomes a means to infiltrate gaming culture and to contribute to the formation of new configurations of game characters, game space, and gameplay. For my contribution I did a project called "Tomb Raider" (<http://proxy.arts.uci.edu/~nideffer/crack/>). At the time of the show, the real Tomb Raider (by Eidos Interactive), and its main heroine Lara Croft, was an extremely popular video game franchise. So popular in fact, it had become the target of one of the most famous underground game patches called "Nude Raider," which stripped the title character of what little clothes she had. I decided I wanted to patch the patch for my project. Tomb Raider consisted of three-parts: 1) an appropriated website where I re-purposed the existing commercial site; 2) a spoofed mail-server that re-routed messages submit to her fan club website to the Director of development at Eidos UK as if it were coming from the Director of Marketing in the US branch; and 3) a patched version of the Nude Raider patch, which placed police blotter style bar codes across Lara's private parts (and gave her a goatee as a Duchampian homage), thwarting the game player's expectation of seeing her polygonal private parts. Tomb Raider has been publicly talked

about presented in a variety of online and offline exhibition venues (see vitae).

The last project I'll mention en route to discussion of more recent work is *PROXY* ('02). *PROXY* was a three and a half year effort that began in '99, and was heavily influenced by my time spent in the digital library community. *PROXY* playfully explored alternative strategies for knowledge discovery, file-sharing, and information mis/management in relation to networked identity construction and collective behavior (<http://proxy.arts.uci.edu/proxy/glance.html>). It was deployed using a custom designed Java-based multi-agent system interfaced to a MOO and Web portal (<http://proxy.arts.uci.edu/proxy/tutorial/menuing.html>). *PROXY* provided innovative techniques for representing personalized data, allowing multiple interfaces into shared information space, facilitating distributed and collaborative data processing, and enabling synchronous and asynchronous modes of communication and information exchange. *PROXY* made its public debut at the Whitney Biennial of American Art in 2002, and has been written about in several media arts anthologies (see vitae).

### *Recent Works: '05-'08*

What follows are brief overviews of select projects that were completed during the '06-'08 review period. It's worth noting that my work has never been created with the goal of showing in traditional arts venues such as museums and/or galleries, although I've had some small success exhibiting in such spaces over the years (the *Perth Biennial*; the *Museum of Image and Sound*, Sao Paulo, Brazil; the *Whitney Biennial*; a piece that's traveled through a number of contemporary arts venues throughout Spain including the *Museo Nacional Centro de Arte*; the *Centro de Arte Contemporáneo*, Almagro; *Centro Párraga*, Murcia; *Centro de Arte Caja Burgos*; Artium, *Centro-Museo Vasco de Arte Contemporáneo*, Álava; *Centre d'Art la Panera*, Lleid; and *Filmoteca Canaria del Gobierno de Canarias*). My inclusion has always been more by accident and/or unexpected invitation than by design.

My projects are primarily produced for distribution via the Internet. It's often difficult to gauge the success and popularity of such work. However, the Web metrics referenced at the end of the description of my most recent two projects ("QQ" and "WTF?!") are at least indicators by which one can begin to measure access and interest.

### *unexceptional.net*, '03-'06

<http://unexceptional.arts.uci.edu/main.php>

Role: Conceptual lead, Character modeling and animation for Web, phone and 3D client, Web layout and design, Story, Technical director.

*unexceptional.net* was nearly four years in development. The project draws on the traditions of comics, graphic novels and computer games in order to create an environment that crosses boundaries between pop culture, fine art, and social critique. It also blurs the borders between "real" space and "virtual" space. Main themes in the work

include love gone bad, conspiracy, and spiritual transformation. The game has been developed as a net-centric, multimodal, pervasive action adventure RPG accessible via GPS enabled phones, the Internet, and a 3D game client. The main gateway to the game is through a Web portal designed by the game's main character, Guy. Guy keeps a Blog documenting his daily trials and tribulations from which he provides running commentary as his chaotic experience unfolds. Guy's life is utterly out of control, and your job is to help him achieve "enlightenment" and regain a sense of stability.

Key objectives of the project include: 1) using unexceptional.net as a testbed for deploying custom designed and freely distributed software that takes advantage of everyday communication technologies such as Blogging, email, 3D gaming, and mobile telephony in order to enable anywhere anytime access to heterogeneous game worlds; 2) implementing the game infrastructure in such a way that it can be used for alternative content development and deployment; 3) facilitating ease of content creation through provision of a Web-based "World-Building Toolkit"; 4) sharing the results in the public domain through Internet distribution, formal exhibition in fine art contexts, professional conferences and events, and publication; and 5) exploring novel forms of individual and community interaction.

#### *A Use-Case Scenario*

Someone stumbles into the unexceptional.net portal and decides to create an account in order to become a registered player. Account creation requires name, email, mobile number, and password. The player now gets an email from Guy, and is forwarded to his Blog which contains a single post providing context for the game about to unfold. The post also gives the first quest, and provides a link for downloading Guy's recently released mobile phone game, "Dick Hunt". The player downloads, installs, and launches the phone game.

When the application starts, the entire game world – terrains, structures, characters, statistics, inventory, quest – gets built based on the player's geolocation in physical space. The game now continues endlessly in every direction due to an algorithmically generated grid-based game-world being shipped in real-time from the server. Moreover, each grid has a simple coordinate that's stored in memory which allows for identical path and object placement on return. The game also sends location information to the game server and begins tracking the player. Later if played without a GPS enabled phone, advancement can still happen by communicating with other players and non-player characters through an online trading network.

After a minute or so the player will receive an incoming phone call from Guy, allowing continuation of the quest in voice-mode using text-to-speech synthesis software. Guy let's the player know that s/he's in the vicinity of a secret spot where Betty (Guy's partner) was rumored to have spent time with Dick (her not-so-secret lover). The player must navigate to a particular physical location where information necessary for quest completion will be found. When the player arrives at the destination, a virtual reward object appears in the

player inventory.

Later the player arrives home from work and logs into Guy's Blog from a PC where updated game-state information as well as the player's path data is plotted as a visual mapping/record of the player's earlier movement over space and time. A Blog-based link to a Web-page associated with the object that contains critical game information is also available. Once accessed, the quest is completed, stats are updated, and a new Blog post and quest are ready for viewing. Next time the player may decide to try the 3D client, which functions similarly to the phone, but without any required physical movement.

Recent books referencing the project include "Second Person: Role-Playing and Story in Games and Playable Media" by Pat Harrigan and Noah Wardrip-Fruin (MIT Press'07), and "From Technological to Virtual Art" by Frank Popper (MIT Press'07).

*Discovery Science Center: DinoQuest, '05-'07*

<http://dqonline.org/>

Role: Principal Investigator, Conceptual lead, Technical director.

From 2005-2007 I served as PI on a large-scale game development project called DinoQuest, in partnership with the Discovery Science Center (DSC) in Santa Ana, California (<http://www.discoverycube.org/default.aspx>). DSC services over 450,000 children annually and is one of the largest science centers nationally. The entire DinoQuest project was a \$7,000,000 venture linking an acre of their physical exhibition site, engineered as a sensor-based informal educational environment to teach body-systems science to children through the use of dinosaurs, to an online site that we developed to extend the experience to the home/school. The UCI Gamelab piece of the total budget was \$300,000. The DinoQuest project has been extremely successful. Since opening there has been roughly a 75% increase in visitors to DSC.

Much of our work involved integrating the data generated by infrared wand devices used at the physical site with our online database and game environments. This unique approach allowed us to reflect current quest status at DSC in the online game space we created. This was the first project done in the context of a science center that so fully integrated the physical and virtual components, and has received considerable attention at various science center and museum venues for doing so. Additionally, Walt Scacchi, the project Co-PI, Joe Adams (President of DSC), and I have lectured widely on the project, and it's potential for engaging children in informal science education (see vitae). We are in the process of localizing DinoQuest for Spanish and Korean speaking audiences.

*HRI Research Residency, '06*

Role: Convener.

In Spring '06 I convened a sponsored research residency entitled "Collaboration

Infrastructures for Game Culture and Technology" at the Humanities Research Institute (<http://www.uchri.org>), a UC system-wide organized research unit. My colleague Walt Scacchi (ICS) served as Co-Convener. Over the course of 3 months, a group of invited artists and theorists discussed issues germane to the emergent field of game studies. In addition to myself and Dr. Scacchi, the core research group consisted of: Anne Balsamo (Interactive Media, USC), Beatriz da Costa (ACE, UC Irvine), Jean-Francois Blanchette (Information Studies, UC Los Angeles), Adriene Jenik (Visual Art, UC San Diego), Henry Lowood (History, Stanford), Greg Niemeyer (Art, UC Berkeley), Jackie Stevens (Political Science, UC Santa Barbara), and Noah Wardrip-Fruin (Communications, UC San Diego).

Concurrent with the residency I conducted an ACE graduate seminar entitled also "Collaboration Infrastructures." This allowed a number of talented graduate students from the ACE program to formally participate in the residency workshops and remote discussions with core participants. It also allowed them to prototype projects in relation to the residency thematic if so desired. Graduate participants included: Eric Kabisch (Ph.D. candidate in ICS), Jeff Ridenour (Ph.D. candidate in ICS), Shan (Harmony) Jiang, Frank Tsonis, Kevin Ponto (Ph.D. candidate in Engineering, UCSD), Cina Hazegh (Engineer at Apple Computer), Pearl Ho, and Greg Elliott.

*Domain Independent Collaboration Environment (DICE), '06*  
<http://proxy.arts.uci.edu/gamelab/portal/content.php?ctID=45>

Role: Principal Investigator, Conceptual lead, Web layout and design, Technical director.

A significant component of the HRI effort, and a big part of HRI's interest in hosting the residency (and providing us \$95,000 of funding) involved our willingness and ability to research and integrate existing open-source software solutions, as well as design and prototype new ones, to facilitate remote collaboration. Walt Scacchi (ICS) served as Co-PI. The money HRI provided enabled us to hire two programmers at half-time for six months, Yuzo Kanomata (an ISR Staff Researcher) and former student Calvin Lee (ICS). I employed them *three months prior* to the residency during Winter '06 to help build infrastructure we would use once the core participants arrived that Spring, and for *three months during* the residency itself. A large portion of our time was spent researching, reworking, and integrating a variety of software tools and services such as blogs, wikis, RSS feeders, version control systems, and modified search and crawlbot utilities. We also designed tools to support mapping and awareness services, video, audio, and web teleconferencing ([http://proxy.arts.uci.edu/gamelab/portal/teleconference\\_mgr.php](http://proxy.arts.uci.edu/gamelab/portal/teleconference_mgr.php)), internal mail client, tagging, translation services, and customization of the portal itself through a php template-based content management system. We used and reflected upon all of these technologies as part of our process in the context of the residency. Having programmers on staff during the residency proper gave us the ability to immediately implement ideas for new tools and services as they emerged. Several institutions, including Duke University, and the Sand Diego Supercomputer Center, have taken DICE and used it, or ideas from it, in the context of their own research and collaboration

domains.

*DAEGU City Game Culture and Technology Research Partnership, '07-'10*  
<http://www.calit2.net/newsroom/release.php?id=1079>

Role: Co-Principal Investigator with Walt Scacchi (ICS).

From 2007 to current I have served as Co-PI on a \$1.35 million dollar research collaboration with Daegu city in Korea, and the Digital Industry Promotion facility housed at Keimyung University ([http://en.wikipedia.org/wiki/Keimyung\\_University](http://en.wikipedia.org/wiki/Keimyung_University)). In '07, under our advising and planning, Daegu finished building a 10,000 square foot research facility that serves as an international "co-located" lab with the UCI game lab in order to support international research partnerships. As part of the project we've sponsored numerous conference workshops, traveled to present keynotes and lectures at various international speaking events, and manage research activities in affiliation with our academic and industrial partners. This is an anticipated first-phase of what we hope will be a long term relationship. Negotiation of this grant took over three years, and began with a visit I took to Daegu in late Summer of '04. Much of the credit for the hard work of bringing it to closure belongs to Dr. Scacchi, and the invaluable assistance provided by CalIT.

*The Grinch Who Stole Office, Christmas '07*  
<http://proxy.arts.uci.edu/flash/grinch/>

Role: Text, Graphics, UI, Game Design, Programming.

The Grinch Who Stole Office is the first installment of a planned series of online "Books for Beginners" inspired by Theodore Seuss Geisel (aka Dr. Seuss). This project was primarily an excuse to learn ActionScript, the programming language native to Flash. I wanted to begin investigating the viability of using Flash as a platform for creating a game development environment that could be utilized both for my own projects, and brought into the classroom as part of my game design curriculum. None of the freely available solutions were robust or flexible enough to do what I wanted from a design standpoint (the game engine and authoring tools designed as part of the "WTF?!" project, described shortly, represent the continuation of this effort).

For the Grinch, I wrote three embedded Flash games, "Debt Downer," "Love Bombs," and "Pulling for Peace," to accompany the poetic narrative. Debt Downer tracks and displays the US national debt in real time. The goal of the game is to use a bucket to catch money as it falls in attempt to reduce the budget deficit. Love Bombs allows the player to fly over foreign zones that have been decimated by bombing, and attempt to spread good will in effort to reduce the escalating feelings of resentment. Pulling for Peace is modeled after tug-of-war. On one end of a rope is the Grinch atop an elephant, at the other end is a collection of "Whos" attempting to stop the Grinch's forward march. The goal is to prevent the Grinch's movement for the remainder of the time he has left in

office. As you might have guessed, each of these games thwarts conventional game design principles and is impossible to win.

*QQ, '07*

<http://proxy.arts.uci.edu/qq/main.php>

Role: Concept and Programming.

In '06 I began playing the massively multiuser online role playing game (MMORPG) "World of Warcraft" (WoW). In addition to adolescents and teens, a core demographic for WoW consists of young (and not so young) adults. In-game the primary mode of communication is typed chat through various chat "channels" (general, trade, guild, party, zone, looking for group, and so on). The conversation, though quite varied, is frequently quite banal, if not outright sexist, racist, and often homophobic.

One of the interesting features of WoW is that it supports a scripting framework that allows authoring of "addOns" to the game. QQ is such an addOn. "QQ" is a string of letters often used in online communication to signify two crying eyes. In game players use it as a pejorative, such as "QQ more," meaning "cry more" or "complain more." So, the QQ addOn simply allows one to randomly spout pirated quotes from famous people who liked to complain a lot. The goal was to playfully introduce more interesting dialog about things like politics, gender, sexuality, philosophy, media and art into the typically mundane chat of the world's most popular (10+ million player) MMORPG.

To date approximately 4,000 people have downloaded and installed the addOn from curse.com (<http://www.curse.com/downloads/details/8868/>), one of many addOn distribution sites. It has been downloaded an unknown number of times from the main distribution site which I host on a university server. Unfortunately I lost all Web-traffic data when the server was compromised in Winter '07 and had to be rebuilt. Due to the server attack I have since decided to host subsequent projects with a commercial provider, which also gives me access to more reliable Web-use statistics.

*WTF?! '07-'08*

<http://www.aoedipus.net/>

Role: Conceptual lead, Character and environment modeling and animation, Web layout and design, Story, Technical director.

Not long after I began playing World of Warcraft (WoW) in '06, I became what's called a "hardcore player," meaning that I would spend a considerable number of hours per week, as part of a competitive high end raiding guild exploring "endgame content." For many, play at that level becomes like a second job. I eventually had to stop for reasons of personal health and professional responsibility. After a six months break, I began to play again, but only on a casual basis. The depth of my involvement and the game environment that facilitated it was fascinating to me, artistically, philosophically, and

sociologically. That fascination led to my next large scale, multi-year project, "WTF?!"

WTF?! is a WoW inspired Flash-based RPG (Role-Playing Game) done in collaboration with Alex Szeto (programmer). In the initial release (May '08), an odd assortment of historical and contemporary figures such as Sigmund Freud, Karl Marx, feminist theologian Mary Daly, Albert Einstein and others have been trapped in a side-scrolling re-creation of WoW. Your job is to help them make sense of the game world. WTF?! is structured to be episodic. The first installment is a 10 level example showcasing much of the game's core functionality (<http://aoedipus.net/primer.html>). WTF?! attempts to do two main things: 1) faithfully *recreate* a majority of the core game mechanics of WoW (a rather Herculean task); and 2) introduce *new* game mechanics that would extend beyond the existing physical combat system to incorporate the notion of *ideological* combat/exchange.

As indicated earlier, providing the infrastructure and tools to facilitate content creation, for developers as well as players, has been a major goal in much of my work. WTF?! has been built with a custom software development kit that we created called "!" (the symbol in WoW indicating when a quest is available). "!" (<http://aoedipus.net/sdk.html>) was made freely available to the player community with release of WTF?!. A considerable amount of effort has been spent on tool development to facilitate player modding and content creation. Using "!", and a highly flexible XML scripting environment, developers can easily create custom terrains, characters, equipment, spells and effects, inventory, levels and experience metrics, stats, weather and particle effects, scripted events, quests and many other advanced features related to the genre of action adventure role-playing game design. Accessibility and ease of use are a big part of what led me to investigate using a technology like Flash to create a freely available, open sourced game development environment that could be used for creative and teaching purposes. I plan to bring "!" into the classroom for student use in Winter '09.

As soon as it was posted in late May '08 WTF?! became so popular that our service provider was forced to "throttle" (reduce bandwidth to) our site. During the first month our distribution site <http://aoedpus.net> (in terms of traffic) was ranked by Google as one of the top 250,000 sites on the Web, placing it in the 99.8% percentile. On average we were getting upwards of 15,000 unique play sessions per day through August '08. This popularity was a double-edged sword. It was good to discover that the potential audience was out there, but bad to find out that the volume of traffic would force us to disable the game from running in the Web-browser environment as intended. Instead we had to refer people to a compressed version of the game to download to play locally. Much of this traffic resulted from major game and technology websites reviewing and linking to us (such as WoW Insider, Grand Text Auto, Newgrounds, Kotaku, Boing Boing, and many others). To compensate for this we created a version that other sites and/or individuals could take and distribute from within their own domains. So true numbers of players are impossible to know with any certainty. However I can safely say that at this point millions of unique game sessions have been played.

## Professional Presentations

In '05-'06 I participated in a number of professional conferences, workshop and symposia at a variety of national and international gatherings. The following briefly spotlights some of the more significant ones: the *Fundacion Telefonica* in Buenos Aires, Argentina (where I presented "unexceptional.net"); the *National Science Foundation* (DinoQuest Online) and the *Humanities Arts and Social Sciences Technology Council* (the Virtual Collaboration Portal). I also talked at various university campuses including the *Digital Arts and New Media* (DANM) Lecture Series at the University of California, Santa Cruz, the *UC Digital Arts Research Network* System-wide Gathering at the University of California, Los Angeles, the *Transliterations: Research in the Technological, Social, and Cultural Practices of Online Reading* at the University of California, Santa Barbara, and multiple talks at conferences and symposia held at the Humanities Research Institute here at the University of California, Irvine.

Some of the more notable speaking engagements in '07-'08 include being an invited speaker for the first *World Game Culture Conference* held in Daegu, Korea as well as the keynote and visiting faculty in residence *the CT Young Investigators Forum* held at the Korean Advanced Institute of Science and Technology in Daejeon. I also was invited to present at the *International Digital Content Conference* held at the COEX Convention Center in Seoul, Korea; the *UC Office of the President's Science and Innovation Board* on Research and Educational Innovations in Computer Games; and the *New Frontiers for Entertainment Computing* conference in Milan, Italy with my colleague Dr. Walt Scacchi. In addition to these engagements I have given a number of talks and project demonstrations at various institutions and conferences (see vitae).

## Publications

Scholarly publishing has not been a focus of my professional work. However, the following is a list of five recently authored or co-authored articles and/or book chapters:

"On unexceptional.net." *Second Person: Role-Playing and Story in Games and Playable Media*. Pat Harrigan and Noah Wardrip-Fruin (eds). MIT Press. 2006.

<http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=11000>

"Virtual Bounds: A Teleoperated Mixed Reality." Kevin Ponto, Falko Kuester, Robert Nideffer, Simon Penny. *Springer*, London. 10:1. (May, 2006).

<http://cat.inist.fr/?aModele=afficheN&cpsid=17869551>

"Game Engines as Embedded Systems." *Database Aesthetics*. University of Minnesota Press. Minneapolis, Minnesota. 2007.

[http://www.upress.umn.edu/Books/V/vesna\\_database.html](http://www.upress.umn.edu/Books/V/vesna_database.html)

"Game Engines as Open Networks." *Structures of Participation in Digital Culture*. Edited by Joe Karaganis. Social Science Research Council. New York, NY. 2007.

<http://www.ssrc.org/blogs/books/2007/12/31/structures-of-participation-in-digital-culture/>

"Collaborative Game Environments for Informal Science Education: DinoQuest and DinoQuest Online." With Walt Scacchi and Joe Adams. *New Frontiers for Entertainment Computing*. IFIP International Federation for Information Processing. Springer. Boston, MA. 2008.

<http://www.springerlink.com/content/u0l58225175020t8/>

### Curated Exhibitions

I've been involved on the selection committee for sub-components of a number of national and international festivals including LA Freewaves '00, Perth Biennial '04 and '06, and Siggraph '08 (see vitae). I'd like to draw particular attention to the two most significant exhibitions I've been involved with since coming to UCI. Both were co-curated with my colleague Antoinette LaFarge (Studio Art), and both exhibited contemporary works broadly related to the theme of game culture and technology.

*Shift-Ctrl: Computers, Games and Art* (Fall '00)

<http://beallcenter.uci.edu/shift/home.html>

Role: Co-curator, Web layout and design direction.

Shift-Ctrl was the inaugural exhibition for the Beall Center for Art and Technology. It was one of the first international exhibitions to showcase the use of game metaphors, design principles, and technologies as part of a critical art practice. We felt this was particularly important to do as games exploded from a niche market dominated by a youth demographic to occupy cultural center stage. The exhibition showcased a broad array of creative work related to gaming, and provided alternative models for looking at how computer games and gaming culture were affecting the larger society. The works were clustered into three main conceptual categories: "role-playing games as shared social spaces," "evolvable and emergent systems," and "world hacks." Shift-Ctrl received coverage in the LA Times, OC Register, OC Weekly, GameFace Magazine, NPR, and PBS affiliate KOCE-TV. The show was supported by Rockwell International, the Beall Family Foundation, RareCSP, Attachmate Corporation, Antenna Design New York Inc., Apple, and Toshiba America.

*Alt-Ctrl: A Festival of Independent and Alternative Games* (Fall '04)

<http://beallcenter.uci.edu/exhibitions/altctrl.php>

Role: Co-curator, Graffiti Coordinator, Web layout and design direction.

Alt-Ctrl was a successor to Shift-Ctrl. Planning for the show, which ran for six weeks, took over a year. It showcased some 60 games and mods from more than 100 artists and/or collaborative groups, representing 9 countries. The show was conceived as a venue for those aspects of game culture that lie outside the mainstream of commercial

game design practices, such as appropriation, sampling, remixing, hacking, and unorthodox forms of hardware and software modding. Three aspects of the show that I'm most proud of, were: 1) curating a show within a show by inviting an international community of graffiti artists to transform the gallery space with a graffiti competition connected to the show's themes; 2) overseeing the design of a public website that showcased both the graffiti and computer-based work; and 3) the fact that the show, although generously sponsored through a National Endowment of the Arts grant, was produced for roughly 1/10<sup>th</sup> the cost of its predecessor, Shift-Ctrl. Alt-Ctrl reached a significant audience and was well covered in the media with spots on public radio (KPCC), several internationally broadcast satellite news stations, and the local press (see vitae).

### Research Affiliations and Memberships

I've been honored to be affiliated with various campus research centers including CRITO (Center for Research in Information Technology in Organizations), ISR (Institute for Software Research), and the Anthropology Department's Center for Ethnography. Off campus I've had the privilege of being a core faculty participant in each of the four digital arts related Multicampus Research Groups (MRGs) funded out of the Office of the President. These include: *Microcosms: Objects of Knowledge*, led by Professors Mark Meadow and Bruce Robertson, History of Art and Architecture, UC Santa Barbara ('99-'04), the *UC Digital Arts Research Network* (UCDARNet), for which I helped author the proposal and served as Co-PI ('00-'05), *Digital Cultures*, led by William Warner, Professor of English, UC Santa Barbara ('00-'05), and *Transliterations*, led by Alan Liu, also a Professor of English at UC Santa Barbara ('05-'10). To my knowledge I am the only digital arts faculty in the UC system that's had this opportunity.

## **II. Teaching and Service**

Teaching remains one of the most challenging and rewarding aspects of my professional life at UCI, and directly relates to my research activities. I was brought to UCI in part due to my own interdisciplinary background (BA Anthropology '88, PhD Sociology '94, MFA in Computer Arts '97), and for being seen as someone that could help build research ties to parts of campus outside the School of the Arts. One of the things I began working on shortly after my arrival was an undergraduate degree in game studies. I first proposed the degree, which included faculty participants from five different schools on campus (SotA, ICS, SoE, Humanities, and Social Sciences), in 2000. It was acknowledged as the first coordinated academic curriculum proposed on the topic of computer games and gaming in the context of a North American research university (see vitae). Unfortunately the proposal hit many bureaucratic walls. As a result we lost considerable momentum compared to many of our competitor programs that emerged in the interim, both domestically and abroad. It was not until Fall of '05, working closely with my colleague Antoinette LaFarge, that I was able to get a new scaled back version of the proposal approved as a "Specialization in Game Culture and Technology" offered solely within the School of the Arts, and the following year was then able to transition it back into a multi-

school "Concentration" and gain formal participation from the School of Information and Computer Science.

Relatedly, in that same time frame I worked closely with my colleague Antoinette Lafarge to develop a game studies track within the department of Studio Art for our undergraduate students, which we formalized in '05. Also during this period I served as one of the creators (with colleagues Dan Frost and Bill Tomlinson from ICS, and later Peter Krapp from Film and Media Studies) of a three-quarter undergraduate sequence called the "First Year Integrated Program" in Computer Games as Art, Culture, and Technology for incoming freshman (<http://www.due.uci.edu/fip/us12.html>). The Integrated Program is a competitive campus-wide sponsored course series that was initiated in '06. Only three such freshman introductory course series were chosen for funding.

Since my last review I have taught a variety of graduate and undergraduate courses (in both the ACE program as well as Studio Art) including studio labs, sponsored internships and independent studies, honors studies, critical seminars, and special topics. I served as the thesis chair for five students (Delvin Hanson, Angela Willcocks, Luv Sharma, Marvin Park, Addiel de alba Solis); and a committee member of six (Sky Frostenson, Adrian Herbez, Ryan Schoelerman, Cina Hazegh, Kevin Ponto, Eric Kabisch, Bruno Nadeau, Eric Cho) from '05-'08. I also served as a committee member on one defended dissertation: Robert Pletka (Ph.D. Department of Education, '06) one advancement to candidacy (So Yamaoka, Ph.D. candidate, Department of Computer Science, ICS), and one in process (Garnet Hertz, Ph.D. candidate, Visual Studies). Currently I am Chair of four out of six of our second year student's theses committees (Josef Nguyen, Faith Dang, Tom Jennings, and Brett Doar).

#### Game Culture and Technology Laboratory

In tandem with my creative work and curricular design activities, I founded the Game Culture and Technology Laboratory as a research hub for project development in 1999 (<http://ucgamelab.net>). Since its inception, the lab has been host to variety of independent and sponsored projects for students and faculty across a range of academic disciplines arts and humanities, social sciences, computer sciences and engineering, and natural sciences. It has proven to be a popular R&D space, and is equipped with a variety of specialized software and hardware related to computer games and gaming.

I feel very strongly that providing students with an active research and development space within which to work on their own projects, collaborate with their peers, or be employed on faculty-driven projects, is an invaluable part of their undergraduate experience. I also am a strong advocate of theory put into practice, and encourage students to work toward that end. Students who choose to pursue the academic concentration in game culture and technology are required to take two terms of independent studies and/or project internship credit to work on sponsored projects in the lab as part of their course of study. It is my sincere belief, reinforced by reports from

former students, that this has proven to be among the most valuable time they spend at the university.

In 2002, with the founding of the Institute of Telecommunication and Information Technology (CalIT2 - <http://www.calit2.net/>), the game lab became co-located, and was expanded to include office and work space in the new media arts layer of the CalIT2 facility as well. The CalIT2 facility functions primarily as a host for post-docs and international research partners who have come for extended visits to work with us.

The lab has been quite useful in serving as a framework for securing extramural funding. To date, over \$4.7 million have been raised since its inception. I am believed to have helped secure as much or more external research funding than any of the media arts faculty across the 10 campuses of the UC system. The vast majority of these funds have been used to equip facilities and hire talented former students to continue working with us in the lab on various projects. I have close collaborations that have continued with some of those students for well over five years now. Prior to the lab's inception I helped raise more than \$6,136,000 (includes \$6,000,000 from the second round digital libraries initiative).

#### Arts Computation Engineering Program

Historically ACE has been housed between three schools: the Claire Trevor School of the Arts, The Donald Bren School of Information and Computer Science, and the Henry Samueli School of Engineering. ACE is a relatively small two-year MS/MFA program, with three staff, four core faculty (meaning at least 50% of their FTE is allocated to teaching core curriculum in ACE), and some 18 program faculty (affiliated colleagues from across campus who teach ACE-related courses and work as advisors for our students). On average we admit 6-8 students with each cohort.

I have been involved with ACE from the beginning, serving on the search committee that brought founding director Simon Penny to campus, and consulting on the two junior hires of Beatriz da Costa (50/50 SoE/SotA), and Bill Tomlinson (originally 50/50 ICS/SotA). For the first two years ('03-'05) I served ACE in the capacity of program faculty, meaning I taught classes open to ACE students, attended faculty meetings, served on thesis committees, and sponsored student internships and independent studies. In summer of '05, largely in response to the increasing administrative difficulties the program was experiencing, I agreed to come on as Co-Director ('05-'07). This past year ('07-'08) I agreed to serve as Director. As a result, since Fall '05, 50% of my time has been officially allocated to ACE.

My duties for ACE have been many – student advising, internal and external review drafting, admissions, exhibitions, strategic planning, Website development, and all such things associated with trying to run/stabilize a small and innovative graduate program. Perhaps the most significant accomplishment, undertaken in response to the difficulty of having a such a small program administered through three different schools, has been

overseeing centralization of the administration of ACE into the School of Information and Computer Science (Fall '07). For the past two years I have also been working through Graduate Council and the Academic Senate to have ACE become an FTE holding program, capable of offering its own MA/PhD degrees. This has become a long and challenging process, but one we're nearing the final stages of. Toward that end, in addition to drafting strategic plans and degree trajectories, I have begun outlining a campus center that will serve as a foundation for affiliated R&D.

### Hosted Conferences

Since my last review, in addition to several workshops and symposia I organized as part of the Humanities Research Institute (HRI) residency "Collaboration Infrastructures for Game Culture and Technology," I've helped plan and host one major campus conference: *MASSIVE: A Research Summit on Networked Multiplayer Games* (Calit2, UC Irvine, 20 April 2006), with colleagues Walt Scacchi and Celia Pearce (<http://www.isr.uci.edu/events/massive/>). Massive was of significant scale and included keynote addresses, over 20 invited speakers, project demonstrations, and recruitment booths. We received planning support from a UC Discovery Grant (\$12,500), and generous sponsorship from the HRI, the Institute for Software Research, CalIT, and the Donald Bren School of Information and Computer Science.

### Hosted Faculty and Researchers

In the CalIT Gamelab facility I've had the opportunity to provide office space, library access, and research facilities for several visiting faculty and post-docs. These include:

*Noah Wardrip-Fruin* (Summer '06-Summer '07): Dr. Wardrip-Fruin was in residence prior to his taking an academic position in the Department of Communication, UC San Diego ('07-'08). He has since moved to Engineering and Computer Science at UC Santa Cruz. While in residence at the CalIT Gamelab facility, Dr. Fruin worked on completion of a book project, *Second Person: Role-Playing and Story in Games and Playable Media*.

*Kane Kim* (Fall '07, 4 month stay): Dr. Kim is faculty in the graduate program in Cultural Arts at KAIST (the Korean Advanced Institute for Science and Technology), in Daejeon Korea, and Professor of Computer Game Engineering at Hoseo University. He is also President of the Korean Game Society. While in residence at the CalIT Gamelab facility, Dr. Kim helped us develop a relationship with one of Intel Research Lab's engineering groups. That introduction led to subsequent funding which we used to help Intel develop an interactive presentation to be used internally to demonstrate how Intel's next generation multicore computing technologies could be used in the context of massively multiuser game environments.

*YongNam Jeoung* (Fall '08-Summer '09): Mr. Jeoung is a programmer analyst staying at UCI for 1.5 years from Daegu, Korea to collaborate with colleagues in the Gamelab on research affiliated with our partners in Daegu, Korea.

*Kook Joong An* (Fall '08-Summer '09): Mr. An is Director of Culture and Arts for Daegu City. He is currently in charge of converting a former tobacco manufacturing warehouse into a multi-million dollar facility tentatively called the "Daegu Culture Generation Plant." Mr. An will be at UCI for 1.5 years to collaborate with colleagues in the Gamelab to help plan the facility and potential exhibitions and future projects to be housed in it.

### Committees

In addition to being involved with various committees related to co-directing and then directing the ACE program, I served as a member of Graduate Council (2006-2008), as a member of two Associate Dean searches within the School of the Arts ('06), and as acting director of academic computing (Fall '05). I have been an active member of the Policy Board for the University of California Institute for Research in the Arts (UCIRA, '06-'08), the sole Organized Research Unit for the visual and performing arts in the UC system, which plays a role for arts practitioners analogous to what the Humanities Research Institute does for humanities scholars. I also have served as a reviewer for various journals and professional organizations including MIT Press, *Game Studies*, UbiComp '07, *Children, Youth, and Environments* ('08), and SIGGRAPH '08. For additional committee work, professional memberships, and participation, please refer to my vitae.