

Picteilín 2016

Creative Media and Game Studies Conference

**Narrative, Interactivity, and
Emergent Digital Practices**



Book of Abstracts



**Creative Media Research Group,
Dundalk Institute of Technology**

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Table of Contents

Foreword	Page 4
About Pícteilín	Page 5
 <u>Conference Abstracts:</u>	
The Game Did Not Take Place Alan Hook	Page 9
Space, place and stories: Exploring non-heterosexual youth and their internet usage in Ireland Kirsty Park	Page 10
CsoundUnity Rory Walsh	Page 11
Ciaran Carson: The Game in the Text Danielle Barrios-O'Neill	Page 12
Performing in the City Marcos Dias	Page 14
Approaches to Team Work in Game Design Education John Healy	Page 16
Designing Technology Enhanced Formative Assessments to Improve Student Engagement and Learning Colin Cooney	Page 17
You've made a doc, so now what? Direct distribution models for independent documentary filmmaking Sarah McCann	Page 18

Investigating LGBT representations in Irish cinema Adam McElligott	Page 20
Usability Testing of Game Controllers Gareth Young	Page 22
Animal Computer Interaction as Speculative and Critical Design Practice Alan Hook	Page 23
An Interactive Virtual Reality Game-Based Educational Application for Cystic Fibrosis Tamara Vagg	Page 25
Measuring Game-Based Learning of Boolean Logic through Puzzle Interactions in a Minecraft World Aaron Bolger	Page 27
The Dyadic Construction of Narrative in the Videogame Ryan Young	Page 30

Foreword:

The digital media sector is one of the most dynamic sectors of a knowledge economy, with the creative origination that underpins the creative media industries affording much potential for experimentation. The Pictelín conference provides a platform for Irish and European academics, postgraduate students, and practitioners to share knowledge and expand the boundaries of research that pivots on digital and creative media.

Hosted by the Creative Media Research Group at Dundalk Institute of Technology (DkIT), Pictelín aims to provide a platform for communication between researchers, and ultimately to provide impetus and a common basis for the future of research in Creative Media. The interchange of research results takes place through keynotes, oral presentations, film screenings and poster sessions.

A strength of Pictelín is that it maximises synergies between disciplines. The conference not only promotes multidisciplinary research, by bringing researchers from music, games studies, computing, traditional media and digital media together to talk about issues from each of their perspectives, but it also promotes and reflects on interdisciplinary research.

Pictelín 2016 focusses on the theme of “Narrative, Interactivity, and Emergent Digital Practices” is the fourth of a series of conferences hosted by the Creative Media Research Group. This years call for papers attracted presentations in the following areas

1. Game Studies
2. Creative Media Content Creation and Technologies
3. Creative Pedagogy and Transformative work practice
4. Media, Culture and Society
5. New Media Narrative Forms

We welcome the diverse cohort of academics and practitioners from Ireland and the UK, enabling participants to learn from others’ experiences and to establish new networks to enable disciplinary growth.

About Pictelín:

Pictelín is an initiative of the Creative Media Research Group at Dundalk Institute of Technology, Ireland. For more information on us and our work, please see <http://www.creativemediaresearch.com>.

Conference Organisers:

Dr Bride Mallon lectures in the School of Informatics and Creative Arts in Dundalk Institute of Technology, Louth, Ireland. Her research interests include new-media narrative forms and Computer Games evaluation. She is particularly interested in investigating (i) what factors affect enjoyment or engagement during game play; (ii) which aspects of traditional narrative are being invoked in computer games; and (iii) how best can narrative be used to increase user-engagement during game play.

She teaches on the Communications in Creative Media, the Games Development, and the Multimedia Web Development degree programmes in Dundalk Institute of Technology.

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Kieran Nolan is an artist-researcher exploring the connective and aesthetic properties of arcade videogame interfaces. He is Programme Director of the BA in Media Arts and Technologies at Dundalk Institute of Technology, Ireland, and is a PhD candidate in Digital Arts and Humanities with the GV2 Research Group at Trinity College, Dublin. Kieran's research work has been published at conferences and exhibitions worldwide, including Vector Game Art and New Media Festival, The Science Gallery, Future and Reality of Gaming / F.R.O.G., International Symposium of Electronic Arts / ISEA, ZIL Cultural Centre, the A MAZE. International Independent Video Games Festival, Transmediale, Game On! El arte en juego, Out of Index, and Art.CHI.

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Conference Abstracts:

“The Game Did Not Take Place.”

Alan Hook, University of Ulster
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Abstract:

This Is Not A Game (TINAG) is a core aesthetic of the medium of Alternate Reality Games, creating a blurred space between the factious and the actual. This opens a liminal space between the story world and the real world spaces or events, those that are in-game or out-of-game. This paper investigates the creative, ethical and practical issues of opening this space and creating a medium, or experience which denies its own existence. The paper considers the creation of Alternate Reality Games as a discipline guided by a core of set of aesthetics and recurring tropes, such as TINAG, the role of the puppet master, the rabbit hole or trail head, the player as agent and co-author, rather than as a form of advertising or a part of a commercial franchise.

The paper gives an overview of these core tropes and aesthetics but argues TINAG is the central or defining aesthetic of the discipline. The paper proposes that through this aesthetic the discipline sets up a dichotomy between the experience and medium existing and is disappearance or transparency. The paper poses, if TINAG is a core aesthetic, and central to the creation or participation in Alternate Reality Games then what is the aesthetics purest form, and is any movement away from this as a consideration of ethics or logistics a diluting of the art form. The paper outlines a theoretical and hypothetical game where the player is never aware of the game, either before, during or after it has happened but is an active participator or agent within the game structure or narrative.

Biography:

Alan is a Lecturer in Interactive Media and a Researcher in New Media and play at Ulster University. His research focuses on play as a mode of interaction in media studies. He produces digital games, playful encounters and likes to explore new ways to use games to explore ideas and spaces.

“Space, place and stories: Exploring non-heterosexual youth and their internet usage in Ireland.”

Kirsty Park, Dublin City University
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Abstract:

Within the last decade there has been a growing body of research focusing on supporting sexual minority youth in Ireland and understanding their experiences, but little is known about how non-heterosexual youth in Ireland use the internet. Understanding these online experiences are key to providing support services and understanding offline experiences.

What does it mean if a young person can access the information they require without the risk of self-disclosure? Are young people less likely to feel the need to ‘move away’ from unwelcoming environments if they can access a welcoming environment online? Do they find the support they need online? Do they even perceive this type of distinction between what occurs online and offline?

Based on questionnaire results and preliminary interviews from my PhD research, this paper will discuss the role of space and place in the lives of non-heterosexual youth from a human geography perspective. The argument made is that the primary change that the internet has brought to non-heterosexual youth in Ireland is opportunities to find their place in spaces which previously did not hold these opportunities. Additionally, one of the main avenues through which this is accomplished occurs through stories and through connecting with narratives which point to finding a sense of place.

“CsoundUnity”

Rory Walsh, Dundalk Institute of Technology
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Abstract:

Adaptive audio for games presents a serious challenge for both developers and sound designers. Existing audio middleware offers some solutions, but fall way short of the kind of tools sound designers are used to working with. As games consoles become more and more powerful, it is time for developers and sound designers to embrace more powerful audio engines.

This paper will focus on a new integrated sound engine for Unity3D called CsoundUnity. The engine provides users with access to the full range of audio processing methods available in the Csound audio programming library, as well as a host of higher level functions for those not familiar with the Csound language. Users can embed Csound instruments directly into their game through the use of a specially designed Unity C# interface. This effectively paves the way for 1000's of existing instruments and effects to be ported directly to Unity3D. The CsoundUnity class will be discussed, along with its various utility methods. The paper will conclude with working examples of CsoundUnity in use in various game contexts.

Biography:

After completing post-graduate music studies at N.U.I. Maynooth, Rory began an 18 month residency at La Villa Media in southern France. Under funding from the French Ministère de l'Éducation he worked as a developer of educational music software for French second-level schools. Following his sojourn in France he returned to N.U.I. Maynooth as a lecturer on their MA in Computer Music degree before eventually joining DkIT as a full member in the School of Informatics and Creative Arts.

Rory has collaborated with a diverse range of artists both as a musician and in the capacity of audio software programmer. His music has been performed at festivals all over Europe and his software is being used in universities around the world, including Berklee College of Music in Boston Massachusetts, Trondheim

University, and St. Petersburg's University of Telecommunications. Rory has presented his academic research at conferences throughout Europe and was a contributor to the "Audio Programming Book" published by M.I.T. Press earlier in 2011.

All of Rory's audio software is available for free under the GNU General Public License.

“Ciaran Carson: The Game in the Text.”

Danielle Barrios-O’Neill

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Abstract:

This paper explores the game-like aspects of Belfast writer Ciaran Carson’s texts, to show compelling links between Carson’s writing and gaming, or more accurately, game structures. Linking Carson’s textual practice to those of Jorge Luis Borges and Mark Danielewski, whose works have also been interpreted as game-like, this chapter reads thematic and structural elements of his novels and poetry include *The Star Factory* (1997), *The Irish for No* (1987), *Breaking News* (2003) and *Exchange Place* (2012) for elements of immersion and rendering text-as-environment to create “game space”, and for the layering of associative clues and missing fragments to incite “game play” in the textual version of Belfast. This reading is accompanied by an investigation of the applicability of gaming theory to Carson’s text, proposing that the critical project can be productively adapted in this way.

Important to my reading of Carson’s game-like elements is Ian Bogost’s concept of *procedural rhetoric*, coined in his seminal research on virtual gaming structures, used to describe the practice of creating dynamic conceptual models in the form of interactive experience.[1] For Bogost meaning derives from interaction and interconnection between sets of virtual sense signifiers, these governed by internal rules and processes; “this is where the meaning and persuasion is situated.”[2] This is also true of Carson’s text, where the internal processes and unique semiotic system that, on one hand, form an imaginative landscape, also enact processes of discovery for writer and reader. I argue that the game-like quality of Carson’s text is less indicative of a desire to evoke (new media) games on Carson’s part than it is demonstrative of the interaction of games in the strictest sense, which are very much a recurring interest for Carson, with cultural and technological elements of the post-digital.[3] One product of this interaction that is particularly useful to understanding Carson is the unique ability of text-as-process to enact realistic relationships in particular historical moments—in effect, to make the experience of the text more direct. This latter argument draws upon the concept of *serious games*, a recently emerged genre of

games designed specifically for the purpose of simulating real-world events and processes.[4]

The aim of this research is to make more clear the relationships between Irish literary processes and global media paradigms, with the understanding that narrative, interaction and media formats are highly convergent and exist on a sort of media continuum in the modern era. This is likely to be especially true for those who have grown up in a digital world, and will have increasing significance to how we read, analyze, and teach Irish literature.

[1] Ian Bogost, *Procedural Rhetoric*, 2007.

[2] *Ibid.*, p. 28.

[3] See Glenn Patterson, "The Game" in *From the Small Back Room: A Festschrift for Ciaran Carson* (Ed. Irvine) (Belfast: Netherlea Press, 2009).

[4] See Michael Zyda, "From visual simulation to virtual reality to games" in *Computer* 38.9 (2005): p. 25-32.

“Performing in the City.”

Marcos Dias, Dundalk Institute of Technology
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Abstract:

Our everyday life in the contemporary mediated city can be envisioned as a performance. We engage with many ‘actors’—human and non-human—while reconfiguring and being reconfigured by our urban surroundings. While the city has been historically a place for efficient and machine-like communication and transportation exchanges, it is also a venue for creative exchanges, ad-hoc performances and alternative ways of living. Most of these exchanges—machine-like or not—are mediated by complex digital technologies that are ‘black-boxed’, hiding away their inner workings while being promoted as friction-free tools to improve our lives. I aim to provide a critical analysis of the interactions mediated by these technologies while referring to participatory art projects that reconfigure their use in urban space. I also propose an alternative view of the city as a collection of machines where the focus is on the performative potential of the relations between these machines rather than their perceived efficiency.

Biography:

Marcos Dias is an Assistant Lecturer in the School of Informatics and Creative Arts in the Dundalk Institute of Technology, where he teaches modules in communication studies, design theory and digital design practices. He holds a masters degree in Interactive Digital Media from Trinity College Dublin and a PhD in Media Studies from the University of Melbourne, Australia. His PhD thesis investigates the social and spatial impact of digital technologies in the contemporary mediated city through ethnographic research on UK-based artist collective Blast Theory. His research interests include performative arts, social interaction, pervasive media, Internet studies, interactive digital design and urban studies.

Marcos was an invited speaker at the 2012 reArt:theURBAN conference (Zurich, Switzerland) and the RIPE 66 conference in Dublin (2013). He is a recipient of the inaugural Gene Burd Track on Media and Urban Life Award of the 42nd

Conference of the Urban Affairs Association (Pittsburgh, USA) and his research has been published in several academic journals including *Cultural Sociology*, *First Monday*, *Liminalities: Journal of Performance Studies* and the *Parsons Journal for Information Mapping*.

“Approaches to Team Work in Game Design Education.”

John Healy, Dublin Institute of Technology
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Abstract:

The discipline of game development education is relatively young; the first higher education programme was launched in 1993 at DigiPen Applied Computer Graphics School in Washington State, USA. Since then the majority of games courses in higher education have been situated within the field of computer science. A recent development within the game education field has been a move away from the discipline of computer science towards art, design and creative pedagogies. This is evident in the BA in Game Design, which has recently commenced at the Dublin Institute of Technology (DIT) and follows the international examples of NYU’s BFA in Game Design and Brunel University's BA in Game Design.

It is in the context of these developments that the pedagogical approaches of game development education should be considered. Many game programmes deliver group projects to facilitate the development of soft skills such as teamwork and communication, as well as discipline specific hard skills. These projects involve students forming or being placed within groups to simulate the workplace environment. This talk aims to propose a number of lenses, developed through a review of the educational literature, which can be considered as a starting point by game development educators when delivering group projects.

This talk will be of most use to those implementing a process-centred approach to group projects as it deals primarily with improving the process of group work as opposed to the outputs.

“Designing Technology Enhanced Formative Assessments to Improve Student Engagement and Learning.”

Colin Cooney, Dundalk Institute of Technology
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Abstract:

‘Size’ gets a dozen or so mentions in the ‘National Strategy for Higher Education to 2030 Report’. All references describe reductions in size - critical of the size of the Board of the HEA and the size and composition of the governance structures of higher education institutions. However, there is no mention of the inevitable increase in the size of classes in the Third Level Sector due to proposed and planned financial and staffing cutbacks. Against this backdrop, this research aims to explore ways to maintain one of our unique selling points in Dundalk Institute of Technology, the close relationships we have with our students.

This paper will describe the initial stages of a PhD research project which investigates the use of technology enhanced formative assessment to improve student engagement and learning for large class sizes. Specifically, the research question will investigate the effect of structured, on-going formative assessments, in the form of online quizzes, on a set of my own students within the School of Business Studies and Humanities, in Dundalk IT.

The presentation will outline the main challenges and benefits of designing these online quizzes and the feedback mechanisms to improve them as part of planned, iterative action research cycles. The research explores issues such as quiz and questionnaire design in terms of user experience, cognitive load theory and learner analytics.

Key Words:

Cognitive load, user experience, engagement, pedagogy, formative assessment, technology enhanced assessment, educational technology, learner analytics.

“You’ve made a doc, so now what? Direct distribution models for independent documentary filmmaking.”

Sarah McCann, Little Road Productions
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Abstract:

Advances in audio-visual technology have, to some degree, liberated the documentary filmmaker from the traditional models of filmmaking within the genre, allowing for greater freedom and a merging of the processes from pre- to post-production, along with smaller crews, lower costs and less barriers to the overall desire to tell a story. However, although the barriers to the actual making of a documentary film are somewhat lessened, what of the barriers to getting the finished film out to an audience? Although traditional distribution channels such as television broadcasts do still exist for independently made documentary films, what are the alternative ways for an independent documentary filmmaker to get their film seen? How important are distribution contracts and film festivals to the selling of a documentary film? Can the former end up being more of a barrier to the filmmaker’s hopes of their film reaching a wider audience? How can film festivals offer more to filmmakers than a once-off screening? How can filmmakers harness the energy of social media and community-based screenings to engage and target a specific audience? What alternative models other than the normal TV broadcast and/or standard distribution contract exist? Is self-distribution an option and what challenges does it bring? What can the rising number of VoD platforms offer an independent documentary filmmaker? And the final question – can any of the new self-distribution models assist in the generation of income? Using case studies of independent Irish documentaries from over the last 5 years, these questions will be explored.

Biography:

Sarah McCann is currently on career break from September 1st 2015 from her role as the Head of Section of Creative Media in Dundalk Institute of Technology, working with her company Little Road Productions Ltd, having also recently produced the 9th Guth Gafa International Documentary Film Festival.

'One Ocean: No Limits', a one-hour no-budget documentary which Sarah recently directed & produced along with performing additional camera & editing roles, was acquired upon completion by RTÉ for broadcast and received reviews such as 'Show of the Day' from the RTÉ Guide and 'Pick of the Week' from the Mail on Sunday.

The film was also signed for distribution by Network Ireland Television, following a successful international festival run where it received awards such as Runner-Up Best Documentary Feature at the All Sports LA Film Festival.

“Investigating LGBT representations in Irish cinema.”

Adam McElligott, Dundalk Institute of Technology
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Abstract:

The purpose of this thesis is to investigate representations of LGBT (Lesbian, Gay, Bisexual and Transgender) characters in contemporary Irish cinema. My work examines four Irish films (*Cowboys & Angels* (David Gleeson, 2003), *Borstal Boy* (Peter Sheridan, 2000), *Goldfish Memory* (Elizabeth Gill, 2003) and *Breakfast on Pluto* (Neil Jordan, 2005)). My rationale for investigating the early 21st century in Irish cinema is that (with homosexuality being decriminalised in 1993) I want to discover if there was a development in the representation of LGBT characters onscreen at the height of Ireland’s ‘Celtic Tiger’. *Cowboys & Angels* and *Goldfish Memory* portray the ‘New Ireland’ (Debbie Ging, 2008), a nation no longer burdened by repression but liberated in an urban and sexually liberal landscape. *Borstal Boy* and *Breakfast on Pluto* examine homosexual relations and issues of gender, sexuality and race in a more sexually repressive era, the 1940s – 1970s.

The theoretical research for this project is highly influenced by writings on Queer Theory and National Irish Cinema. Key researchers that are referenced throughout this study include: Fintan Walsh who examines queer theory in relation to contemporary Irish cinema during the ‘Celtic Tiger’ period; Allison Macleod and Martin McLoone examine the use of urban space in queer Irish cinema; Zélie Asava examines issues such as gender, sexuality and race in Irish cinema; Conn Holohan discusses trauma, narrative and subjectivity in Irish cinema. Debbie Ging’s work on representations of masculinity in Irish cinema will also be important to my research. Other key theorists and researchers are listed in the literature review of the Methodology section. The methodological research for this thesis includes a guided content analysis on the key scenes from the four primary films with final year video and film production students at Dundalk Institute of Technology along with two guided content analysis with LGBT activists from the LGBT support service Dundalk Outcomers. This form of research will broaden my knowledge through qualitative analysis as I aim to understand how LGBT characters in Ireland are constructed onscreen in a social and political discourse.

The aim of this thesis is to be informative to new filmmakers' work while contributing academically to the developing area in Irish film studies. This research is also aimed at contributing to debates on the changing landscape of the nation, exploring spaces where we are all equal regardless of sexuality, gender or race.

Biography:

Adam Mc Elligott is a graduate of the BA (Hons) Degree in Video and Film Production at DkIT. He is currently studying for the Masters by Research in Creative Media. Adam's research topic is 'investigating LGBT Representations in Irish Cinema' under the supervision of Dr Zelig Asava.

“Usability Testing of Game Controllers.”

Gareth Young, University College Cork
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Abstract:

Here we present an investigation that compares the performance of game controllers in two-dimensional pointing tasks as defined in the international standard that specifies the requirements for non-keyboard input devices, ISO 9241-9. Additionally, we discuss the evaluation of usability and user experience with these devices during gameplay. We compared performance measurements for controllers while varying the user’s exposure to the different feedback elements contained within each controller device. We assessed the performance of the controllers according to the ISO 9241-9 evaluation recommendations. The devices used in the study included a Logitech mouse and keyboard, a Logitech Bluetooth Touchpad and keyboard, a Sony Playstation DualShock 4 controller, and Valve’s first generation Steam Controller. As well as the performance testing, we measured user experiences with the controllers while playing a popular first person video game. Participants were asked to complete game levels for each type of controller and answer questions outlining their experience.

Biography:

Gareth Young is a PhD candidate of Digital Arts and Humanities at University College Cork, Ireland. He received his MSc in Music Technology from Dundalk Institute of Technology (2009) and his BEng in Sound and Broadcast Engineering from Glyndwr University (2008). Gareth’s main topic of research is the design and evaluation of haptic feedback for digital musical instruments. He is a well seasoned sound engineer and a part-time composer. His past work has been performed at the DRHA conference (Dublin, Ireland), the Hilltown New Music Festival (Hilltown, Ireland), the INTIME Symposium (Coventry, UK), and at both DKIT and UCC schools of music in Ireland. In addition to his interests in engineering and music technology, Young holds a postgraduate certificate in English Language Teaching that has taken him to China and South Korea. You can find further information about his work at garetheyoung.org.

“Animal Computer Interaction as Speculative and Critical Design Practice.”

Alan Hook, Lancaster University
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Abstract:

The focus of Animal Computer Interaction (ACI) design has primarily targeted the utility of the design object, with emphasis often being on improving animal wellbeing, increasing animal productivity, or easing the tensions formed by incorporating animals into Human centered environments. The discipline has championed non-anthropocentric design, design that does not locate Human subjects at the centre of the design process. ACI's utilitarian approach is understandable and also mirrors many of the practices and methodologies within Human Computer Interaction; however it can marginalize other forms of Computer Interaction which could offer interesting reflections on animality and both the animal and human subject. This paper will broaden the consideration of ACI by reviewing a number of key examples of Game Design that focus on feline interaction and try to map some of the issues which arise when designing for cats as subjects.

This reflection leads to the proposal of ACI as a possible space for Critical or Speculative Design can be thought of as design practices which use designed objects to reflect on possible and plausible futures and the creation of designs as critical objects. By replacing the human in a number of design scenarios, new configurations of the design subject and design object can be produced to open spaces for critical reflection.

Biography:

Alan is a PhD candidate within Lancaster Universities Imagination research cluster, studying towards a PhD by practice in Critical and Speculative Game Design. His work uses inter-species design, and Animal Computer Interaction (ACI) as a vehicle to question the notion of play, promote inter-species empathy and reflect on games as a critical tool. Alan also lectures in Interactive Media at Ulster University.

“An Interactive Virtual Reality Game-Based Educational Application for Cystic Fibrosis.”

Authors:

Tamara Vagg , Dr. Nicola Ronan , Prof. Barry J. Plant , Dr. Sabin Tabirca
tv3@cs.ucc.ie

Affiliations:

- 1. Department of Computer Science, University College Cork, Western road, Cork, Ireland*
- 2. Cork Adult CF Centre, Cork University Hospital, University College Cork, Wilton, Cork, Ireland*

Abstract:

Cystic Fibrosis (CF) is a genetic disease inherited from birth which affects many parts of the human body. One effect is the chronic overproduction of mucus within the lungs. In addition to medication, this mucus production requires multiple varying daily physiotherapy techniques in an effort to clear. Despite this necessity, adherence to such clearance techniques remains low.

Games and gamification techniques have proven to benefit many sectors such as education, learning and medicine. Game engines can provide a platform for the development of such educational games with the added benefit of multiple platforms for deployment, including Windows and Mac executables, web and, a virtual reality head mounted display executable. However a virtual reality game to disseminate CF education has yet to be created.

This paper proposes such a game for use on a the Oculus Rift Development Kit 2. The system was designed by implementing educational pedagogy theory and gamification elements such as interest points, an objective, player pawn navigation and gaming inputs such as a gamepad.

A 3D model of the bronchial structure was created using Blender. The model was then exported as a wavefront object (obj file). The model was then imported into Unreal Engine 4 (UE4) and populated with interest points which project Heads Up Display (HUD) widgets containing information regarding CF and its effects

on the lungs. The objective is for the user to operate this novel approach in education to view the effects the mucus has on the lungs by locating and interacting with each interest point. Interactions at these interest points include watching short 3D animations, reading textual information, listening to breathing sounds affected by the mucus, and using inhaled antibiotics to reduce the mucus in the airways. This can be seen below in Figure 1.

This system has yet to be tested, however it is anticipated that it's novel approach will prove advantageous in an outreach program and innovative strategy to encouraging CF physiotherapy adherence

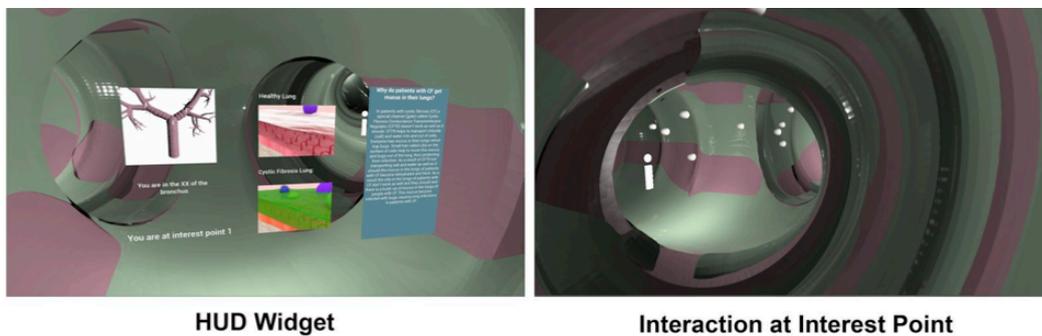


Figure 1: Image of HUD and Interest Point.

“Measuring Game-Based Learning of Boolean Logic through Puzzle Interactions in a Minecraft World.”

Aaron Bolger, Dr Konstantia Pantidi, Dr Conor Linehan.

University College Cork.

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Abstract:

Game-based learning has the potential to advance the effectiveness and engaging qualities of STEM education (Christel *et al.*, 2012)(Yien *et al.*, 2011)(Papastergiou, 2009). Research that critically examines features and processes successful to game -based learning design is beginning to emerge. For example, a recent study has demonstrated that successful puzzle games such as Portal, Braid, and Lemmings teach players complex skills through smaller simpler components, and methodically chaining these together (Linehan *et al.*, 2014). This paper proposes a system that tracks and analyses how students learn complex skills through interactions with individual puzzles.

This research focuses on the Game -Based Learning of Boolean logic. It forms part of the “Boole2School” project run by University College Cork, which provides materials to secondary school students for teaching and learning Boolean Logic. We have built two systems; 1) a Minecraft game, that teaches Boolean Logic concepts through in-game puzzles, and 2) a system that analyses player interactions in order to recognise and classify problem solving behaviours.

The game teaches Boolean logic through using “and”, “or” and “not” logic gates, built with resources inside the Minecraft world. Each logical concept is introduced and explained, followed by a concept -based puzzle. The student solves the puzzle through interacting with levers, buttons and pressure plates in the Minecraft world, as seen in Figure 1. Each player and puzzle interaction is recorded. Our system is built using the game Minecraft and its ScriptCraft API, but it’s anticipated that the same framework can be used in other games. Minecraft is a widely popular sandbox game that includes MinecraftEdu, an education -oriented version of the game. Additionally, Minecraft has the facility to have extended functionality added through modding APIs; in this case ScriptCraft.

Our data analysis system can recognise a player's problem-solving skills needed for puzzles in game and recognise where skills have been applied appropriately and inappropriately; whether problem solving is methodical or based on trial-and-error, and whether individual puzzle objectives are clear. This analysis will allow future developments such as: providing appropriate corrective feedback to students, adapting the game to player performance, and improving the game design.

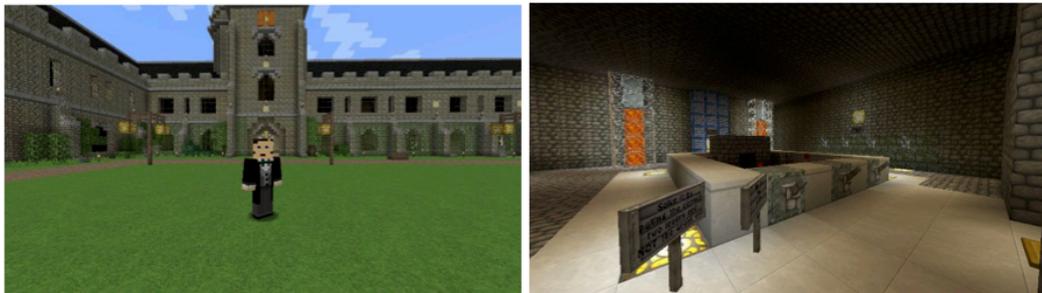


Figure 1. Screenshots from the BooleWorld game.

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Biography:

Aaron completed his MSc in Interactive Media in University College Cork in 2014, specialising in alternative user input and navigation for virtual reality head mounted display. Following on from this research, he began his PhD Studentship in 2015 under the supervision of Dr Conor Linehan and Dr Nadia Pantidi of the School of Applied Psychology in UCC, and is currently researching advancing learning through augmented and virtual reality technology, with a particular interest in the measurement of learning through interaction and 3D visualisation in a game environment.

“The Dyadic Construction of Narrative in the Videogame.”

Ryan Young, Ulster University
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Abstract:

The construction of narrative in the videogame differs from that in non-ergodic media forms (Aarseth, 1997; Veale, 2012). Where the film and literature texts exist in their entirety prior to their reception, the videogame requires the interaction of the player to be completed as a text. Though similarities exist between these different media, the ergodicity of videogames requires an exploration into how narrative meaning is created by both developer and player.

This paper elucidates the construction of narrative in the videogame by both developer and player. Before it is played, the game exists purely as a system of rules and objectives: there exists only the potential for a narrative text to emerge. As a framework of rules, the game system is then appropriated by the player for the autotelic purposes of play (Sicart, 2014). There is, however, a tension between the narrative intentions of the developer and the possible subversion of those intentions by the player. It is presented here that there is a spectrum of narrative construction between the constraints of the developer (Bogost, 2007) and the free appropriation of the player (Malaby, 2007). On one end of the spectrum where developer control is absolute, diegetic narrative techniques such as cutscenes and audio diaries are used to constrain any possible narrative interpretations. At the other end of the spectrum, the absence of these diegetic techniques opens the text to the creation of meaning by the player. A crucial element in the construction of narrative in the videogame is whether the objectives are embedded in the system by the developer or pursued by the player independently within the game environment. By exploring this spectrum of narrative control over the text, the relationship between narrative and the videogame can be further understood.

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