

# การศึกษาการใช้สตอปโมชันแอนิเมชันในการสร้างสรรค์เกม 'Lumino City' Study in Relevance of Stop Motion Anima- tion Featured in Creation of the Game 'Lumino City'

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## Abstract

The purpose of this article is to review the usage of stop-motion animation feature in creation of the video game 'Lumino City'. Firstly, to be discussed is the type of genre this game falls into which is a Point-and-Click Adventure game, how they are presented over the years, the mechanisms of the genre, then into relevance in play theory in mass communication of the medium. Next is to analyse the behind the scene creation of 'Lumino City' and how it shapes the overall aesthetic of the game which affects certain gameplay mechanics. We conclude that the usage of stop-motion aesthetic in Lumino City is merely visual attraction and can be substituted by other styles in order to achieve better overall experience of the game.

**Keywords:** Video Game / Stop Motion / Interactive / Aesthetics

## Inspiration

Stop motion is usually a non-interactive media where it is constructed and presented to the audience and with the recent digital production technologies, it is now much easier to produce a stop motion feature. In a medium as video game, stop motion has been utilised before although not in the same scale as what Lumino City has achieved. What triggered this study is not just their techniques in stop motion animation production but to critique on how relevance in its inclusion to the game as its mechanics and if the stop motion is merely a cosmetic choice by the developers.

## Objectives

1. Study the history of Point-and-click games and its relevance to play theory in mass communication
2. Study the stop motion production in the game Lumino city to prove how relevance it is to the game and its mechanism.

## The Point-and-Click Genre

The Point-and-Click is categorised as sub-genre of "Adventure" game which started out as a text-based narrative, the invention of a mouse as computer peripherals have revolutionised how

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people navigate and command in computer operation which in turns, also provides a new way to control gameplay of various games at the time. Notable titles that defined the genre are ‘Secret of Monkey Island’, ‘Day of the Tentacle’, ‘Broken Sword’ etc. The genre reached its peak with ‘Myst’ which was released by Broderbund in 1993 made the genre became more popular (Walker, Trey (2002-03-22). “The Sims overtakes Myst”. (GameSpot. Retrieved 2017-06-15.)



Figure 1: Screenshot from the game ‘Myst’

### The Major Characteristics and Mechanisms of Contemporary Point-and-Click Games

1. Point-and-Click Adventure games are controlled using mouse cursor to point on objects, characters and environments then click in order to interact with them. In some games, it is required as the means to move the characters. Touch Screen input in modern mobile devices have become a new home to point-and-click genre for its simple controls.

2. Point-and-Click Adventure games are structured with casual pacing which place no constraint in time or limited number of lives or continues unlike other genres such as action or fighting games.

3. Point-and-Click Adventure games usually consist of considerable amount of puzzle solving in order to progress, i.e. find and use an object, combined that with another object in order to use as set key piece to open the door or move the narrative forward.

### Other Notable Point-and-Click titles

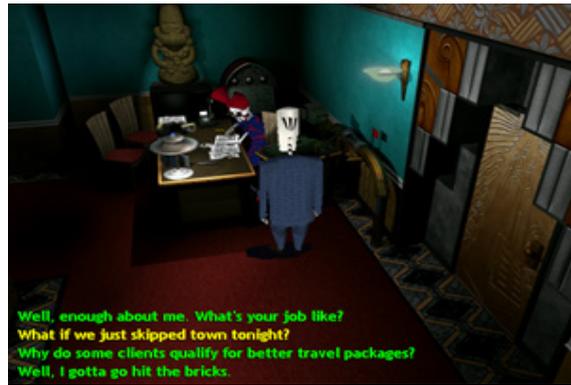


Figure 2: Grim Fandango (1998, LucasArts)



Figure 3: Sanitarium (1998, DreamForge Entertainment)

### Motives in playing this genre

Apart from the obvious reason to play video games which is a mean to relax, there are other motives that entice players to continue playing the video game. Point-and-Click Adventure games are heavy in story and to progress narrative further, player are usually tasked with set objectives to complete or exchange of items to another non-playable characters. The acts of collecting items and artefacts in-game, as well as the sense of fulfilment in finishing the game to the point of credits roll provides player with plenty of motives to play on.



Figure 4: Secret of Monkey Island screenshot showing control and inventory items (1998, LucasArts)

**The Classification of games**

According to the definition of play by Roger Caillois in his book “Man, Play and Games”, which kind of play does the Point-and-Click Adventure game falls into?

|                    |                      |
|--------------------|----------------------|
| agôn (competitive) | mimicry (simulation) |
| alea (chance)      | ilinx (vertigo)      |

We can certainly rule out agôn and alea, since Adventure games do not have competition in its game mechanism nor do they contains a roll of dice mechanism for random encounters or chance to hit like Role-Playing games. However, it can contain both element of mimicry and ilinx in which player can assume the role of the protagonist in the narrative and the camera movement of some modern Adventure games can induce vertigo to players as well as simulate adrenaline rush in certain scenes as defined by Callois as the “momentary disruption of perception” (Callois, 2001).

**The Play Theory of Mass Communication**

Video games can be classified as a genre or particular kind of game similarly to television programme or films. We identified key elements in common themes of particular genre as follows;

**Formulaic elements present in Gaming Genres**

|                      | Genre             |                     |                      |
|----------------------|-------------------|---------------------|----------------------|
| Element              | Action            | Role-Playing        | Adventure            |
| Location             | military base     | castle              | island               |
| Time                 | future            | medieval            | British colonisation |
| Hero                 | soldier           | knight              | son of blacksmith    |
| Heroine              | girlfriend        | princess            | daughter of nobles   |
| Secondary Characters | hero’s partner    | sidekick            | monkey               |
| Villains             | evil alien        | evil sorcerer       | pirate captain       |
| Plot                 | restore peace     | kidnapped princess  | betrayal             |
| Themes               | revenge           | fantasy             | treasure hunt        |
| Costume              | military          | medieval English    | old English          |
| Locomotion           | military vehicles | horses              | ships                |
| Weaponry             | guns, knife       | swords, staffs, bow | swords, guns         |

Table 1: Sample of possible formulaic elements in game genres (Adapted from: Burger, Arthur Assa, Essential of Mass Communication Theory, 1995)

The most significant function of mass communication is to facilitate “subjective play,” to give people pleasure, an interlude from the pressing matters that concern the most of the time.

William Stephenson.

Video game such as Lumino City does pertain the function in giving people, or in this instance, the players, the pleasure and interlude from pressing matter based on what William Stephenson has described. The game Lumino City also pertains the traits in the formulaic elements of point-and-click adventure genre.

### *Game Production*

According to the article by Gamasutra (2015), the developers of Lumino City, State of Play has initially been developing games with partial elements which are hand-made. They decided to push the limits of their production further with full-scale game environments with an entire model city. The developers used Adobe Flash at first as a platform to visualise how the design would look like before putting it into full scale models. As for aesthetics choice, one of the co-founder of State of Play, Luke Whittaker has a background in Flash and has been making games for online portals as well as animations. He felt that he wanted to make bigger games with hand-made arts which prompt him to reach out to other artists to help making his visions a reality.

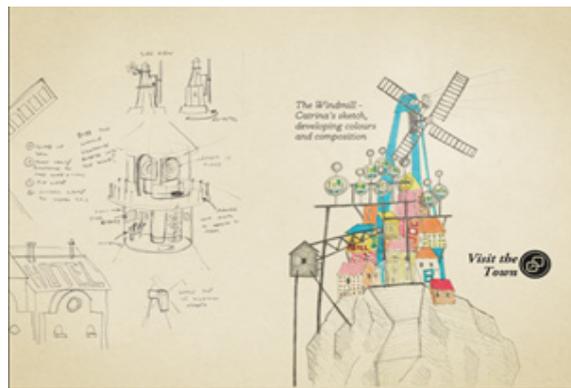


Figure 5: Initial sketches of the game setting (The Making of Lumino City, 2016)

Lumino City models was not created by digital 3D environment, all models are mostly hand-crafted with some laser cutting for tedious and meticulous items such as the ladders and railings.



Figure 6: Laser cuttings made for items that requires intricate details. (The Making of Lumino City, 2016)



Figure 7: Construction of the Ferris wheel (The Making of Lumino City, 2016)

Apart from the mostly cardboard-made sets and items one of the visual aesthetics choice that made Lumino City stands apart is the utilisation of depth-of-field focus. By narrowing the depth-of-fields, player will be unconsciously

guided to focus on what the game wanted the player to focus on, for example, at one point in the game player can tap on the blurred view of the city in the background and the game will change its focal point to the city, making it increasingly clearer in focus.



Figure 8: Screenshots of Lumino City depicting in-game depth-of-field shifts (Lumino City, 2015)



Figure 9: Behind the Scene shot in filming Lumino City (State of Play, 2015)

are the results of a controlled robot arm that moves with the customised game controller to move the robot arm around while the camera shoot. This technique mimics the camera movements usually only seen within other 3D games where camera movements are actually a set of codes to coordinates the camera position, angle and shifts.



Figure 10: Simulated camera movement with robot arm (The Making of Lumino City, 2016)

### Compositing Elements

Some scenes in the game requires multiple shots as there are composited movements to be shown to the player. This is demonstrated well in “The Making of Lumino City” app where State of Play explain how the shot is composed.



Some camera movements seen in game

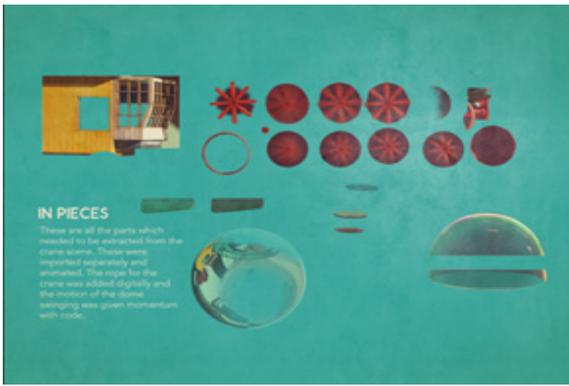


Figure 11: Step-by-step showing the composition of the scene. (The Making of Lumino City, 2016)

**Game Reception**

|  |
|--|
| Awards and Accolades   |
| 2015 British Academy Games Awards, Lumino City won the “Artistic Achievement” category, and was also nominated in the categories “British Game” and “Game Innovation”. |
| 2015 Independent Games Festival, Lumino City was nominated for the “Excellence in Visual Art”.   |
| 2016 Games for Change Awards, Lumino City was nominated in the “Most Innovative” category  |

Table 2: Awards that Lumino City has won and, or nominated

Overall, Lumino City received positive reviews by various sources most notable mentions were from TouchArcade who placed Lumino city at their Game of the Week feature when the game was released on iOS platform. Positive praises of the game revolve around its visuals such as “It’s like a fairy tale comes to life.” (Touch Arcade, 2014), “a gorgeous puzzle adventure game” (AppAdvice, 2015), “It’s a huge, intricate world. Lumino City has a distinct and wonderful personality. Stunning.” (The Verge, 2014), “An astonishing place to explore.” (Eurogamer, 2014) and “Simply stunning paper crafted visuals” (TrustedReviews, 2015).

Lumino City is visually impressive indeed however, it is not without flaws. First hand experiences proved there are some elements of the game that hindered gameplay, we find the lack of some visual cues to let the player know which objects presented on the screen are the key elements that player can interact, often we find ourselves tapping wildly on the screen just to check possible clues. Some review sites also picked on the similar gripe such as “It’s sometimes tricky to tell what you can and can’t interact with” (GameZebo, 2015). Apart from lacking visual cues or making objects that can be interact with more prominent from the background,

Lumino City was also criticised for its unintuitive puzzles as some critic wrote “many of the puzzles in Lumino City are derivative, obtuse, tedious, challenging to execute or some combination of the four” (Pocket tactics, 2015). One of the puzzles that gets to most players is the circuit switchboard right in the beginning portion of the game. Without consulting to the in-game guide book showing that it requires lemons, the puzzle is almost impossible to solve.

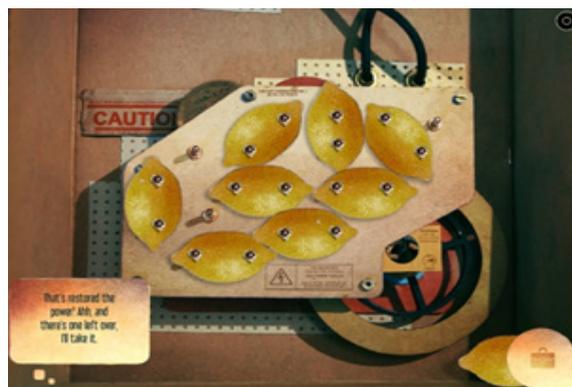


Figure 12: The lemon switchboard puzzle (Lumino City, 2015)

## Game Comparisons

In order to prove that the aesthetic choice of Lumino City affects the gameplay itself we take a look at other contemporary games of its time by looking at similar elements. We found two games with similarities in its mechanism and two games with similarities in its visual presentation.

### Games with similar mechanism

Love You To Bits (iOS) is a 2D point-and-click adventure with cartoonish visuals where player controls the protagonist by tapping on screen to tell him where to move to. One of the main distinction that made the game intuitive to players is that the game will highlight object as player character moves nearby accompanying by a balloon icon depicting blue hand signifying players to tap and interact with it.



Figure 13: Love You To Bits highlights objects that player can interact (Love You To Bits, 2016)

Machinarium (Windows, MacOS, Linux, PS3, PS4, PS Vita, iOS, Android) is a 2D point-and-click game with hand-drawn sketchbook-like visual. Machinarium offers visual cues similarly to Love You To Bits, however it gives out more information to the player in the form of animated thought bubbles to tell players what needs to be done or what object it requires.



Figure 14: Machinarium utilises pictorial thought bubbles to indicate objectives (Machinarium, 2017)

Both games when compared, have a way to inform the player in its puzzle objectives as well as clues all without any need of text or worded caption. It can almost equate to silent films where information is presented only in visual format.

### Games with Similar Visual Style

Tearaway (PS Vita) is not a Point-and-Click but an Adventure game nonetheless. This game has visual style of a handmade paper craft like Lumino City, however, it is entirely 3D, digitally made to look like actual paper with its texture, shadings and simulated lighting. With current generation of consoles and computers it is possible to replicate the 'authentic' looks of a hand craft visuals without having to resort to manually crafting each model. In this instance developing times took only over a year to complete unlike in Lumino City which takes over three years to complete. If Lumino City utilises this technique, it could have saved a lot of time in developing the game. Tearaway visuals are certainly incredible and believable to resemble the real deal, however to its own merit, Lumino City visuals still pertain the authenticity of physical objects.



Figure 15: Tearaway's faux-paper handcraft visuals (Tearaway, 2013)

Splitter Critters (iOS, Android) is a puzzle game in its core. The game has a visual style of a paper craft storybook with the mechanism in the player swipe the screen to split the world and rearrange it to guide critters back to their spaceship (RAC7, 2017). Similar to Tearaway, Splitter Critters created with a faux-paper models to simulate the texture and feel of actual paper. We want to point out that the puzzles found in Lumino City could also incorporate some form of interactive controls in which player can manipulate the environments similarly to Splitter Critters. This could have immersed player to the level of control to the surroundings.

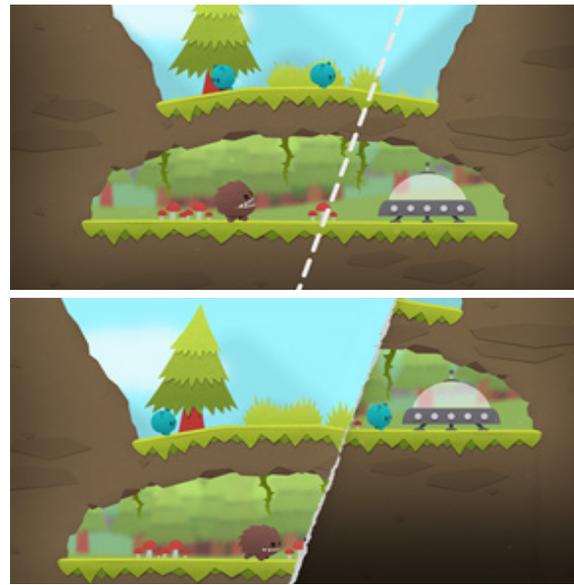


Figure 16: Splitter Critters' paper storybook visuals and 'tearing' mechanism (Splitter Critters, 2017)

## Conclusion

Lumino City is indeed a great artistic accomplishment in visuals, in gaming and production techniques involving stop motion. What it falls short is the lack of visual cues to inform the player of objectives or identifying objects to interact with. There could be a slight adjustment in the game to remedy this problem, for example, make the objects stand out by adding short moments of shift in depth-of-field in order to highlight said object. This brings its core visual appeal to rectify the problem without having to resort to change the look of the game.

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