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Abstract

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ARG HandbooK

What makes a good ARG?

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# Introduction

An ARG – meaning alternate reality game – is a type of game that is like a mass scavenger hunt that can span across any form of media (going from the web to a physical book and then to a real-life geographical location as an example). These games can often be very cryptic in nature and can sometimes be used as a marketing tool to build hype around a new release, a form of recruitment to test people’s abilities in a certain field or can just be for fun and have no real goal – essentially a wild goose chase.

Given the nature of how these games are made, it can be difficult to successfully make one that is also fun and enjoyable for the player and there doesn't seem to be many places to find a list of things that have to be included and what shouldn’t be included either. This project will look at what elements are core elements of ARGs and what makes a good ARG.

# Objectives

To ensure that the project stays on-track, the project will be split into 3 objectives.

## Objective 1

The first objective will be to research what makes a game an alternate reality game by looking at already existing ARGs, examining what they’re used for (entertainment, marketing etc.), and comparing what elements they all have in common with each other and how popular they were

## Objective 2

Using the information gathered in the first objective, the second objective will be to make an ARG that contains all the elements that the researched ARGs share as well as some ideas that may seem enjoyable or fit narratively.

## Objective 3

With this ARG complete, a survey will be conducted where people try to play it, and feedback will be collected on what they enjoyed as well as their overall opinions on the ARG that has created. Using this information, a helpful poster will be created outlining the Dos and Don’ts of making a good ARG.

# Background Research

As previously stated, an ARG is a game that takes place in the real world in real time and often jumps between different forms of media, being able to go from books to the web to physical locations and sometimes utilise physical mail and telephone calls as well. They are sometimes used by companies to advertise upcoming projects (such as a new game, album or series of a TV show).

From an academic perspective, ARGs have been seen as very intriguing. A paper by Jeffrey Kim (2009) states that organisations, non-profits, schools and government agencies could use ARGs to easily bring people together to help each other solve problems and potentially be used as a recruitment exercise. However, ARGs have also been used in schools as it can help young children practice their problem solving skills due to the various puzzles that must be completed.

One of the first influential ARGs to surface was a game called The Beast by the developers was made to help promote the movie A.I: Artificial Intelligence (2001) and had over three million players across the entire world spanning hundreds of websites as well as players getting emails and phone calls which inspired many participants to create their own ARGs.

Perhaps one of the most well-known ARGs is Cicada 3301 who’s cryptic messages and complex puzzles had the internet gripped for almost the entirety of the 2010s. While not much is known about who created it, some people who were contacted by Cicada reported that they “had to answer questions about what interest you had in encryption” (Daniel Tucker, 2013).

These are two short examples of ARGs that have made an impact on the genre and shows how they can be utilised by organisations. However, this project is about what makes a good ARG. The next three chapters will be focused on specific ARGs, looking at what puzzles they contain and how they can be played.

## Frog Fractions 2

Frog Fractions 2 was the sequel to Frog Fractions which was styled as a game to teach young children about fractions, but nothing is actually taught. While the first game isn’t an ARG the second game is. The success of the first game caused a Kickstarter campaign to fund the creation of a sequel and a video was released along with the campaign which, at first glance, seemed to be a genuine pitch for the game but was interrupted with some cryptic messages.

According to Game Detectives (2018), when opening the source code of the developers’ website some code can be found and removed, the user can find the link to a video. If the player takes the audio from the video and runs it through some complicated audio decrypting software which gets revealed to be code for a Game Boy Advanced ROM which when run in an emulator produces a version of Rick Astley’s “Never Gonna Give You Up” (a common internet joke known as the Rick-roll).

Another web page on the developers’ site includes instructions about making bread. These instructions can be put into the text-based adventure section of the first Frog Fractions game which will result in the player being given a URL which then takes them to another game called Obama Shaving Simulator. After the player successfully gives Obama a clean shave, a message is shown telling the user to go to a specific location at a specific time – bringing the ARG into the real world. At this event, a series of events happened that were references to the original Kickstarter video. Someone at this event drops a bag of floppy disks which contain images of bug porn from the first Frog Fractions game. These images had data which could be translated to give a message, but some images were locked behind a password. When using a string of numbers found in the Kickstarter video, an MP4 file is revealed containing a walkthrough of the original Frog Fractions game.

As this ARG is so long, a summary of the puzzles that happen from that point forward include running images through steganography software, translating morse code, playing a user-created level of Super Mario Maker, several twitter accounts from characters established in the Kickstarter video, as well as people receiving physical boxes that contained writing that could only be seen under UV light. The ARG concluded with another game called Glittermitten Grove being updated to include Frog Fractions 2.

This ARG is by far the most complex of the 3 being analysed in this report as it seems to require a decent amount of computing knowledge and cryptography, as well as having small real-life events happening in the real world which would require players to leave their house and travel which could mean it is one of the more less-accessible ARGs.

## UFO 50

One of the most recent ARGs to surface comes in the form of a game called UFO 50. On the surface, the game is a collection of 50 8-bit styled games that are all separate from each other – save for the fact that they were all developed by a fictional publisher UFO Soft for an old console (Christian Dolan, 2024). As the player plays through the games, they slowly learn about the history of the publishers.

The heart of the ARG lies in the game’s “terminal” (see figure 1) which allows the user to enter commands such as help, list & info to perform various actions as well as enter codes to load up one of the 50 games that can be played.

A screenshot of a video game

Description automatically generated

(figure 1 – a screenshot of the game’s terminal taken directly from the software)

The ARG starts when using the INFO command on one of the games where the user is told that it is the “first game directed by longtime designer Greg-milk.” The clue of “first game” indicates that this is where you begin looking for hidden secrets and the name Greg-Milk fits perfectly into the character spaces of the terminal. Doing this will reveal a 10x5 grid of 0s with a single 1 which represents one of the games. If you explore this game, you will find a symbol that can also be found in the terminal and when opening it, a hidden clue relating to another game. The player must then go to the game hinted at, perform a specific action and then open the terminal to find the next clue to continue. For example, the first clue reads “FIFTY GAMES FOR YOU TO SEARCH THROUGH, WHAT A HUNT I HAVE FOR YOU! I OFFER UP THIS STARTING CLUE: TURN YOUR SKIN A SHADE OF BLUE” which references one of the games called camouflage where the player must turn the chameleon they play as blue – opening the terminal will reveal another clue to the next game. Eventually, the player can piece together a code to play a hidden 51st game which tells more story about the development company.

One of the main things that makes this game stand out from other AGRs is that it never leaves the confines of the software – in the sense that the player never needs to go to another website or an old Instagram account or grab a physical book. In one perspective this could be seen as a good thing as venturing outside of the main software could be seen as daunting to some players and they may not bother; however, this does mean that some people may not count it as an ARG

## Twenty One Pilots and Dema

Not all ARGs can be used just for entertainment with some being used as promotional materials for a show, movie or an album – an example of this is the band Twenty One Pilots who made an ARG to promote and build up hype for their 5th, 6th and 7th albums as well as using this ARG to give more details on the story that they are trying to tell with their music.

The ARG started on the 21st of April 2018 when, according to the Fandom Wiki page, a reddit user found a GIF on the store page for their album Vessel which showed a URL, dmaorg.info which when entered, would take the user to a website that would display an error code and a message to the user saying that “they” can’t find out about this page with a violation code. When going back to the store page, there would be another GIF that had an extended but incomplete version of the original URL. Users figured out that the violation code on the original site is what was missing (making the full URL: dmaorg.info/found/15398642\_14/clancy.html) and this took them to a website filled with letters from a character called Clancy who is trying to escape a city called Dema run by 9 bishops – all of this is a representation of the lead singer’s psyche and his struggles with mental health. These letters were filled with references to songs that would later be released on the band’s upcoming album Trench. This website would later be updated with more letters to build up hype for future albums which revealed more of Clancy’s story.

### Level Of Concern

In June 2020, the band started another ARG which was purely something to entertain fans during the COVID-19 pandemic. This ARG started on the 12th of June when a livestream was uploaded to the band’s YouTube page which showed a TV that would have images briefly flash on screen. One of those was a code that could be translated into a phone number which, when called, explains that there are several codes and clues hidden around the internet for people to find. There was a link in the description of this livestream which took users to a site that would ask for a code – this is where the heart of the ARG was. Each code entered would allow the user to download a folder that contained images which contained hidden clues as to what the next code will be. After the 20th code, a website was revealed which allowed users to upload videos of themselves dancing to the band’s newest single *Level Of Concern* which would then be used in a future project. The first 500 people who entered the 20th code received a USB which contained old demos the band had made.

As previously mentioned, each code entered allowed the player to download a zip file which contained clues to the next file. Some codes were found in the main livestream, some were hiding within the files that had been downloaded and some still haven’t been discovered – people found the clue but no knowledge on how was shared. Some notable puzzles include code 7 which, according to a google document created by a small group of fans (‘LOC Scavenger Hunt Document’, 2020) included a word search of the band’s songs and all the remaining letters & numbers that weren’t included in any of the words formed the 7th code. The 8th and 9th codes included a string of text which had to be decoded by moving the letters around using a specific key that was given/hinted to in the images themselves. The 10th code was found in an audio file which played morse. The 13th code included a URL which when entered, a fake “terminal” that asks the user to enter a bunch of keywords that are hidden in the various images that came with that zip file. The final code involved the user looking at the html code of the website to find a CSS file which was an encrypted string which gets revealed to be braille which translates to a message telling the user that they have essentially won.

# Comparing Research Data

One thing that all these ARGs have in common is hidden codes. These codes can range from numbers being translated to messages to morse code. They all also seem to tell a story of sorts: UFO 50 tells the story of a game company going bust, Frog Fractions involves time travel and Twenty One Pilots tells the story of someone battling with their mental health. Another thing that they all seem to have in common is that while most of them branch away from an initial starting point, they all return to it. The Level Of Concern ARG always returned to the band’s main website, Frog Fractions 2 always seemed to have puzzles being discovered in the first game and UFO 50 was entirely self-contained.

Between the two ARGs that are used as an actual game (UFO 50 and Frog Fractions 2), their art style seemed to be very similar in that they were both pixelated – giving them a retro feel. A fair assumption can be made that one of the main elements of an ARG is that any games will be much more popular if they look old – this assumption can be supported by the fact that Frog Fractions 2 involves using a Game Boy Advance emulator and UFO 50 takes place on an old console that uses cartridges to house each game. Adding on to this retro feel, all the games seem to include some puzzles that make the user feel as if they’re hacking or involve some low-level data/code: Frog Fractions 2 requiring you to compile code, Level Of Concern having quite a lot of steganography and UFO 50 having the terminal for the fake game console.

Using this information, here is a list containing elements that an ARG must include:

* Some form of easily recognisable code
* An area of the ARG that takes place outside of the main game
* A retro style/low-level computing feel

The puzzles that included will make use of these elements however the difficulty of those puzzles may be hard to decide on. There is a website (Game Detectives) that offers free practice on ARGs by teaching the player the basics of topics such as ciphers, web development, steganography, Boolean operations and other topics that may seem dauting to beginners. To account for this, some of the puzzles in the ARG that will be created for this project will include some of these types of puzzles and player feedback will show the general opinion of them.

# Creating an ARG

To test to see of the elements highlighted earlier are things that make a good ARG, an ARG is going to be made using those elements and more which will be given to people of varying computer literary levels to see what they like and dislike about it.

To ensure that the game is accessible to anyone, it is worth noting that the ARG that will be created will never require the player to leave their house and venture off into the real world.

## The concept

The ARG that will be created will start of as a top-down 2D game where the player must move through several levels that are presented as an un-finished demo game from the mid-1990s. After the third level. They will be asked to follow a link to purchase the full game. Going to this URL will show the player a fake Page Not Found screen which gives them the option to enter a code to access the full website. Navigating this website will allow them to download a pdf of a hand-written cheat sheet that tells the player that they can access a command prompt within the game and enter commands that allow them to change levels quickly, as well as access two hidden levels that can’t otherwise be found. Within the html of the website, they can also find hidden a C++ program that contains some morse code which explains how to get to the true ending of the game.

In order for there to be sense to the puzzles and not have the user feel like they are on a wild goose chase, the game will have to have a story. Due to the top-down 2D game being styled as a demo that is un-finished and was not received well, there will be little story actually taking place within the main game; most of the narrative will be revealed in the downloadable pdf of the game’s user manual which gives a backstory on some characters that don’t actually exist and have been made up to make the narrative feel more alive. The narrative of the top-down 2D game will follow a character called Ellie who is exploring castle grounds trying to bring her cat, Molly, back to life (which is where the game’s name comes from: Myth Of Molly).

The game will have multiple puzzles which will be one of the things that players will be asked about in a questionnaire after completing the game. These puzzles include converting a string of binary numbers into denary which will be used as a code to access the main website. They will also need to open up inspector mode on the website to find a hidden C++ program. This program will also contain some morse code that, when translated, will hint to the player what parts of the 2D game to go to in order to win. As well as all this, the player will also be using a pseudo command prompt where they will need to ender specific commands to navigate through the secret levels.

## Tools

The main game will be made using Godot 4 as it seems best suited to make a 2D game with, compared to other engines such as Unity which takes a lot of processing power and Unreal Engine which, while it can make 2D games, it is best suited for 3D games (as well as also taking a lot of processing power to run, like Unity). Unity have also recently changed their pricing model which will charge publishers a certain amount for every install after a certain threshold (The Verge, 2023). Even though there won’t be enough people installing this game for this to be an issue, Godot still feels like the best option.

Artwork for the game will be sourced from Itch.io and sound affects will be sourced from freesound.org. All assets sourced will be free and creators will be given credit in a menu within the game.

The website will be developed using html and will be hosted using GitHub as they have a free web hosting service as long as the URL contains “github.io” which will not be an issue. Using GitHub as the web host is also useful as the 2D game is also being stored on GitHub to help with version control if anything goes wrong whilst it is being developed.

The game will be downloadable from itch.io as it allows players to download the game for free as well as restricts who can actually download the game making it easier to control who play tests the game; this won’t actually be necessary but is an option in case internet trolls find it and give false feedback (although this is still highly unlikely). This itch.io page will also explain to players what the game is for, what they need to think about while play-testing the game.

# Gathering feedback

With the game now complete, a selection of at least 10 people have been collected and have agreed to play-test the game and fill out a feedback form detailing their opinions on puzzles throughout the game. This questionnaire will ask what they thought about the puzzles in this ARG, how difficult they found it and overall enjoyment. Players will also be asked about their experience with computers to put a perspective on how difficult they thought the puzzles were – for example, if 80% of players thought the binary puzzle was too difficult but all of them had little to no experience with computers and the 20% who found it easy already understood binary numbers, it will offer a different perspective of results rather than coming to a blanket conclusion of “80% of people don’t know binary numbers”. This decision was made due to the Game Detectives website that was found during the research stage.

## Questionnaire results

**TBC**

# Bibliography

Christy. (2024). *Cross-Media Entertainment» Blog Archive» Top ARGs, with stats*. Cross-Mediaentertainment.com. http://www.cross-mediaentertainment.com/index.php/2006/03/04/top-args-with-stats/. Archived at: http://web.archive.org/web/20060420094207/http://www.cross-mediaentertainment.com/index.php/2006/03/04/top-args-with-stats/.

*Dmaorg.info*. (2024). Twenty One Pilots Wiki; Fandom, Inc. https://twentyonepilots.fandom.com/wiki/Dmaorg.info#Timeline

*Frog Fractions 2*. (2016). Game Detectives Wiki. https://wiki.gamedetectives.net/index.php?title=Frog\_Fractions\_2

Hana, Diana, R, Spark, & Ricec. (2019). *LOC Scavenger Hunt Document*. Google Docs. https://docs.google.com/document/d/15TkMIapi0ZLvu7wUKUmnYiCAWij62hVzmv-Q3ctkMGw/edit

hyphz. (2024). *Steam Community :: Guide :: Terminal Guide*. Steamcommunity.com. https://steamcommunity.com/sharedfiles/filedetails/?id=3336000877

Kim, J. (2009). *Storytelling in new media: The case of Alternate Reality Games, 2001–2009*. Archived at: https://web.archive.org/web/20120617032134/http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2484@article/2199.

The Verge. (2023, September 14). *Unity unites the indie game industry against its new pricing model*. The Verge. https://www.theverge.com/23873852/unity-new-pricing-model-news-updates

Tucker, D. (2013, October 30). *Meet the Teenage Codebreaker Who Helped Solve the Cicada 3301 Internet Puzzle | Note to Self*. WNYC. https://www.wnyc.org/story/meet-teenage-codebreaker-who-helped-solve-cicada-3301-internet-puzzle/