

# Digital Media Project

## UFIEWS-30-3

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*Interactive Storytelling*  
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## Summary

This report aims to cover the Digital Media Project module for Sean Patrick Payne, the project focusing on interactive storytelling in the form of a text-based adventure game, utilising PHP as the scripting medium in an experimental exercise.

Details will be given on the extensive research undertaken from a variety of sources within the game industry, the creative thinking that supported the development process, some minor considerations given towards users/players and how they interact with what I have created, and some light summary of technical developmental thinking.

## Project Access

Accompanying this project should be a CD-R containing copies of all the files I created for the project for ease of access and reference (utilising a text editor such as *Notepad++* or an IDE such as *Komodo*). These files should be in their correct directories and accompanied by “readme.txt” files that explain how everything is structured. If this CD-R is missing please contact Sean Payne immediately at [email address redacted] and he will endeavour to create a new copy and deliver it to you at your convenience.

Due to the scripting language utilised by the project (PHP), a server environment is required to run it properly. As such, the project is available to be run at <http://www.cems.uwe.ac.uk/~sppayne/dmp> from within UWE. Apologies that I could not arrange for an exterior URL from UWE from which to run the project.

There is no “back-end” or administrative interface to be concerned with, as the project never demanded the need for one.

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## Introduction

This project has been an exercise exploring a concept that one has always pondered upon during the first two years of undertaking Web Design while learning various formats of scripting and mark-up languages: could someone adapt a scripting language to create a game in the style of the now old-fashioned text based adventures?

I had entered this module with my mind blank as to what to attempt. I am not particularly imaginative at the best of times, and I had suspected that I would end up recreating a basic faux e-commerce system from a textbook in a rather uninspired exercise of building another website. However, after talking with a colleague, they mentioned that they had discussed creating a game as a project with another colleague who is currently in the middle of their work placement. This jogged my memory as to my previous thoughts over the previous two years, and this module appeared to be the perfect opportunity to experiment. The appearance of “interactive storytelling” as an example project title on the project proposal guidance reinforced my confidence further.

My work placement colleague had apparently been planning to create some form of warfare strategy game, and I would not be surprised if this is their project next year. However, I have not ever been one for that genre of game, and I have always preferred adventures that are both more cerebral and character-based, hence why an adventure game was my choice of project.

But why choose a game at all? Surely this project would be more suited to a different module, if not a different course altogether? The truth is, although video games are one of my passions, it is not an industry I have ever wanted to become a part of - I am a great believer in the idea that the quickest way to kill one of your hobbies is to turn it into a job. I must also admit that I have always struggled with deep mathematics, so a course in game design would be a step too far in terms of stretching myself.

Another question that might be posed is “why use PHP to create a game?”. Flash or Shockwave would surely be better tools to create something that can be embedded into a webpage, with the added bonus of being graphics-centric. I must admit that I have always fancied learning Flash, as my brief encounter with it in my first-year Media Technologies module was an exciting learning experience that left me wanting to play with it some more. However, manipulating PHP as a scripting language was my choice as it was more directly beneficial towards assisting my learning across other modules, and I suspect that Flash and ActionScript would be tools that I would quite happily learn in my spare time within a hobby context.

This is where the project started - I had ideas, with no idea how to implement them with my chosen scripting language and wondering if I even could.

## Where to Start?

Planning out the entire project right from the beginning was a prudent approach to how to begin the project. By referring to Appendix 1 (Project Proposal Form) and Appendix 2 (Project Progression Form) one will be able to see that I mapped out the project's timetable across the months, and this proved most useful in the long-term. It was not adhered to completely throughout the project, but the timetable up until around December certainly mirrors what was undertaken within those months.

Supporting this was a "development blog" at <http://uwe07973430.blogspot.com/> which was used to document progress, at least over the first four or five months. Like the timetable, the use of the blog became more fluid between February and March due to an influx of module deadlines. There will be parts of this report that refer to and elaborate on learning described within the blog, so please do feel free to refer to it as support for this document.

Apologies now if material is repeated from the appendices or the blog, but since progress was documented in some detail during research/development it is apt to try and capitalise on it.

## Aims and Scope

To summarise the project objectives (in reference to those outlined in Appendix 1):

- Deliverables - a text-based adventure game that is accessible online, accompanied with all the planning documents and thought-out game concepts, along with exploration of Web 2.0 elements and project documentation (of which this report counts).
- Intangible aims/learning objectives - develop an engrossing experience built upon previous examples of interactive storytelling, consider interface implications i.e. how the user will interact with the product, and build personal knowledge of PHP usage, preferably what separates "good" from "bad" coding.

To summarise the project scope (in reference to the scope confinements presented in Appendix 2):

- Deliverable scope - an online prototype of the interactive adventure game, any documentation accompanying to be presented within this report. This online prototype should have at least three "working" puzzles and opportunities for the player to interact with the presented descriptive environment.
- Knowledge scope - to have a better understanding of PHP as a medium, particularly concerning applicability/appropriateness of its use, constraints, security, "well-formedness" of code and reuse of code. Many of the findings for this will be presented here.
- Out-of-scope - applicable business context that the project may have, in-depth exploration of usability (i.e. any testing is primarily for testing the durability of the code and to see how well a user interacts

with the interface), deep interface design (on the grounds that the project is trying to create an experience that is textual rather than graphical).

Once again, the summaries here are diluted versions of the full aims, objectives and scope presented in the appendices, so please refer to Appendix 1 and Appendix 2 for the full versions. Reflection on how well the aims were achieved and whether the project stayed within the self-imposed scope will be discussed within this report's conclusions.

## Project Appropriateness

This aspect of the project never had much support, as the implications of experiences from other modules and the fact that this is “the big final year project” suggest that something with such a theoretical and creative basis might not be befitting. However, the following reasons are posited as to why this project was carried out:

- It was something I was interested in doing - incentive is not required if one is enjoying the work.
- It would allow experimentation with a scripting language I was struggling with, which would be a benefit to me across other modules as well.
- It would allow creativity and the chance to try one's hand at something different and original.
- I have knowledge of various game critique resources as video games are my hobby, and I could use them as sources of knowledge for the research.
- Since it was an experimental project, it would give new insights to talk about.

Admittedly, there were several reasons to oppose the project as well:

- The format of the project is not like what was produced in other modules i.e. it only had one specific purpose.
- The project's output was not a service or an application, could feasibly only be used a few times, and is described as an “experience”, which is hard to validate.
- It would not leave much opportunity to dabble with concepts such as Web 2.0 and other popular modern website implementations.

Other drawbacks will arise during the conclusion segment, but at the outset I was enthusiastic that I had made a good decision in my choice of project, despite the fact that it does not fill a particular business context “niche”.

## Preparation

Unlike other web-based projects carried out in the past, this one required a lot of theoretical and creative input, so those were the focus of the beginning of the project. To summarise the overall plan of development (refer to Appendix 1 - Monthly Project Plan to see what I originally planned):

1. Research what makes an intriguing experience for the purposes of “interactive storytelling”, what engages the user/player and how one could apply this learning to their own project.

2. Research puzzle archetypes that can be used to one's advantage, on the basis that most interactive experiences require thought from the user/player, as well as some form of conflict or problem solving.
3. Develop a creative brief and elaborate using research as basis. Produce the documentation of intent i.e. game map, blurb, concept images, paper prototypes, digital prototypes, etc.
4. Become (re)acquainted with PHP and its requirements.
5. Experiment! This is a vague point, but as tutors like Prakash Chatterjee will tell you the best way to learn a new scripting language is to use it, break it and "play" with it.
6. Develop the deliverables.

This is a simplified version of the process that was planned and followed, to varying degrees of success. It could be described as being "top-heavy" due to the process being particularly weighted towards academic learning at one end, rather than alternative processes that might encourage academic theory application throughout development e.g. at regular evaluative points for purposes of QA/QC (Quality Assurance, Quality Control) cycles. The successfulness of this "fixed-stage" approach will be discussed in the report conclusion.

The process will now be described in detail, and the structure of the rest of this central part of the report will follow the stages above.

## Forming the Academic Basis

It is apt to begin this section by quoting from the project blog, on the aim to establish what makes a good game narrative, what will draw returning players to what might be considered an archaic game format: “So I've basically set myself the task of defining what games developers still don't know and have been striving to distil for the last ten or fifteen years. The only knowledge I have of games is as a gamer, and I've never touched any sort of game development tools before. I'm feeling confident...I mean, with odds like those I've got nothing to lose!”. However, humorous interjections aside, there was some success in devising some understanding of what one could do to present a worthwhile interactive experience.

Guardian columnist and ex-PC Zone writer Charlie Brooker gave a simple definition of an “adventure” game in his BBC4 hour-long special “Charlie Brooker’s Gameswipe”, a program intended to inform those not familiar with video games and their concepts: “Adventure game: an interactive narrative in which the player assumes the role of the protagonist” (this was accompanied by a visual metaphor of a man reading an oversized book). This definition matched the mental image one received when thinking of the project title “interactive storytelling”, and thusly boosted one’s confidence. Brooker further goes on to elaborate that “traditional computer adventure games, which are basically a series of puzzles linked via plot, have fallen out of favour in recent years which is a terrible pity if you ask me. Yes, story is often a game’s weak spot...”.

Brooker’s description was appropriately accompanied by a discussion on modern game storytelling by sitcom writer Graham Linehan, who posited that “what game developers have stopped doing is reading books”, and whose argument was formed around the idea that a literary backing of plot is superior to quoting popular culture such as films and television. From this it was elaborated that the literature narrative was the project USP (Unique Selling Point) and that an original concept for the experience was in order. Strangely enough, one of the questions posed by colleagues during the initial project workshops was whether I would be basing my game on an existing game, television show or film, which struck one as an odd question on the grounds that it would not be much of an interactive experience to dilute and emulate something that already exists!

## What Makes a Good Story?

The main frame of reference for asking this question was the input of game critics and game industry developers, on the basis the imposition of some form of constraint on my references was required lest references expand to include tips from famous authors and creative writing classes; keeping the context in games and interactivity was important. A criticism of this could be that some of the sources are mainstream “hacks”, or that deeper reference material could have been utilised. The justification for this was that the aim of the project was to utilise an outdated format to appeal to modern audiences, so modern critics would do for reference. An abridged



summarisation of the research into narrative follows (please refer to the blog to see the full exploration of material presented here).

How to construct a good game narrative:

- Avoid popular culture too much - your experience can be hollow if it just references popular culture all of the time (Linehan, 2009).
- Present consistently challenging puzzles that ostensibly test the player; solving these challenges is, in theory, biologically satisfying. The player "plays" in order for the fulfilment of the narrative itself; if the player is enjoying the story, failing to progress becomes a form of punishment (Bateman, 2009).
- A narrative may be considered "good" depending on how the player relates to the main character (Crowshaw, 2009), on the grounds that "moments of humanity" and back-story justification can act as a framing device that endears the character to the player. This was not so much a problem in my context as the player would be the protagonist.
- The best plots in games are not overlays, so that "story" is separate from "gameplay" (Thurman, 2009). The project would have an easier approach of producing this - the format of the adventure game is set up to allow the player to try and do what they want to do. Admittedly, there is actually a reinforced linearity in the limit of choices, but the illusion of unlimited (or simply multiple) options are what is integral. In other words, if the player character has only one interaction with characters and the game environment, the player may find the narrative uninteresting. The player needs to drive the story.
- Conflict is a good source of motivation for the main character, and for the player if it is intriguing enough (Drucker, 2009).
- There are three types of motivations and player styles (Lindley, 2005):
  - Achievers - driven by in-game goals.
  - Explorers - driven to explore the game world and learn about it.
  - Socialisers - using the world to converse with other players.
  - Killers - driven to cause stress and grief in other players.

Arguably the first two are what would apply to text-based adventure games on the basis that it is a single-player experience.

- The purpose of narrative is often to explain the rules of the game to the players as they cannot experience it first-hand. An author selects setting/s, and characters but not events in this context as they are left up to the player. Although the author ultimately dictates whether the ending will be good or bad, it is the player's influence that dictates how to get there (Grant and Bizzochi, 2005).
- When the story happens around the player, it can make the game more memorable than the experience of playing (Passafiume, 2009).

## Why Would People Care?

Similarly, most of these research points were derived from personal impressions of exploring around the internet around the subject of text-based interactive fiction. This is obviously not a credible method of academically answering the question, but once again this was just exploring the question as a means of elaborating on what makes a game “good”, as opposed to within the context of user-thinking. Many of the examples found in the next few bullet-points were located by accident, which was reassuring as it suggested commonality.

What will draw returning players to what might be considered an “archaic” format:

- There is not much call commercially for new text-based adventure games; it is a niche hobby. This was gathered from reading around websites and databases built to store text adventure games made as hobbies. Graphic-less text-based adventures are still kept alive by small corners of the internet that act as repositories for “interactive fiction”, and an avid “interactive fiction contest” community. Good examples of these communities and repositories would be the Interactive Fiction Archive ([www.ifarchive.org/](http://www.ifarchive.org/)) and iFiction ([www.ifiction.org/](http://www.ifiction.org/)).
- There is a resurgence of these traditional games online, using the browser as the interface. For example, Improbable Island ([www.improbableisland.com/](http://www.improbableisland.com/)) and Kingdom of Loathing ([www.kingdomofloathing.com/](http://www.kingdomofloathing.com/)).
- Primary appeal is that this interactive fiction is free to download and play.
- People still play these games for the reason people still read books, because they stimulate our minds (Walker, 2006). Imagination provides the visuals, so arguably this is a subconscious level of interactivity that still appeals to people.
- Walker’s outlook may actually be contested on the basis that he slates generated imagery as being inferior to the imagination, but graphics and narrative can go “hand-in-hand”, and images can actually enrich an experience (Greene, 2008).

## Puzzle Archetypes

The resource used for gathering puzzle types is a catch-all website for popular tropes and archetypes in television, film and other media - TV Tropes (<http://tvtropes.org/>). Although being an interesting and useful resource, it is unfortunately as reliable as citing Wikipedia on the grounds that its articles are produced in wiki format, often by anonymous sources. However, given that the research was only using the source as a generic reference rather than academic reference, the use of it is possibly justified. Some of the following puzzles were actually collected from one’s general knowledge.

The following are the puzzles which were researched and considered:

- Weighted Switch Puzzle - a door will only open if you place a weighted object on a button, or tie down a switch with rope. Versatile, the main point is that pressure needs to be applied to something over a prolonged period, often using a tool.
- Water Level/Current Flow Puzzle - to reach a higher ledge, the player is required to raise the water level of an environment via switch or plot device. A good analogy would be the fable of the crow raising the water in a bottle by dropping in pebbles.
- "Robinson Goldberg Contraption" Puzzle - named after the drawings by Rube Goldberg and William Heath Robinson, in which there are ridiculously complicated sequences of events to achieve something trivial e.g. the inventions in "Wallace and Gromit", the board game "Mousetrap".
- Counterweight Puzzle - a variation of the weighted switch, involving pulleys and counterweights.
- Block Puzzle - stacking, pushing and pulling blocks (often in the form of boxes and crates) in order to progress further through an environment.
- Control Room Puzzle - the player encounters a room of switches that are required to be set in a particular way in order to progress.
- Spot the Odd Door Out Puzzle - "does what it says on the tin", one thing looks different to the others, sometimes in a subtle way, and is the correct way forward.
- "Enter Solution Here" Puzzle - player is presented with a situation which requires an answer, often a word, phrase or series of numbers, to be entered. The correct answer is usually hidden in the environment, or is found as a result of solving another puzzle.
- 3 and 5 Litre Jug = 4 Litres Puzzle - a puzzle that requires the player to make 4 litres using a 3 and 5 litre jug. The answer is actually rather simple, but the player is often flummoxed due to over-thinking the situation.
- Item Combination Puzzle - the player is required to combine two items together (often in their inventory) in order to create a new item required to progress. For example, two halves of a key glued together and used to open a locked door, a broken chainsaw combined with a broken chain in order to cut through a particularly high hedge.

As Charlie Brooker described earlier, these adventure games often are a series of puzzles tied together with story. This idea was supported by the research into how to structure my game, and represent the structure.

## Game Structuring

It was appropriate to delve into a little bit of "proper" game theory, and so after a little bit of reading around about some popular adventure games, a document was located known as "Grim Fandango: The Puzzle Document", an actual piece of industry insider material that the developers for the game "Grim Fandango" used as reference material when constructing the game. As well as being interesting, it also showed various methods of how to

map out the game. In particular, the methods for mapping the puzzle structure (please refer to Appendix 3 for the example given in the Puzzle Document, as well as the project's interpretation in terms of needs and requirements) and the method of mapping out the environment (see Appendix 4) were utilised.

The one flaw to using these modelling techniques is that they involve thinking with abstracts, and still require terminology of how to describe the structures. Majewski offers four basic models of pre-designed video game narrative in his thesis "Theorising Video Game Narrative":

1. The "String of Pearls" model (Fig 1.1) - player moves from one fixed event to the next, the most freedom being between events. This is often referred to as a "linear" narrative.
2. The "Branching Narrative" model (Fig 1.2) - player is occasionally allowed to select which event they want to move to next from a choice.
3. The "Amusement Park" model (Fig 1.3) - player is presented with an open environment with many event paths and is allowed to choose where they want to go.
4. The "Building Blocks" model - not at all relevant to the project as it refers to games without narrative, where the player makes all of the story decisions e.g. like in online role-playing games where players are allowed to "roam free" and any story is constructed purely in the player's mind.

Considering these models, the one adopted during development was an amalgam of the "String of Pearls" and the "Amusement Park" models. The rationale for this is given from the fact that the beginning and end events were fairly linear in terms of room-by-room progression, but the central component the game revolves around the player being able to move freely between three or four rooms (as represented in Appendix 4B).

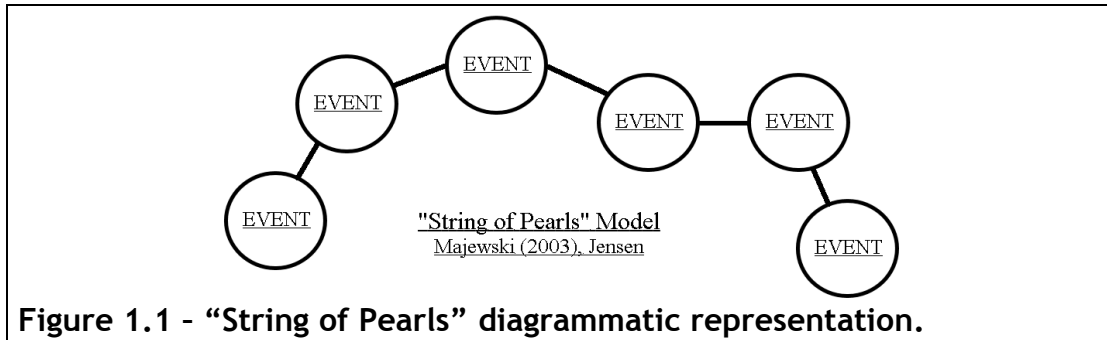


Figure 1.1 - "String of Pearls" diagrammatic representation.

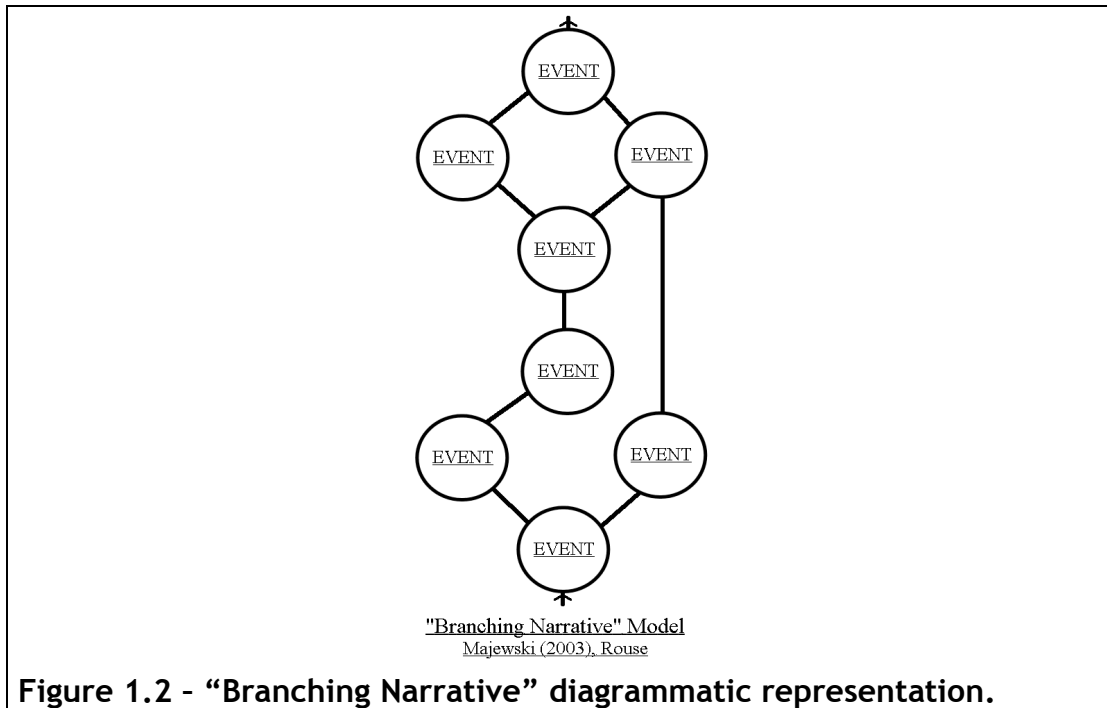


Figure 1.2 - "Branching Narrative" diagrammatic representation.

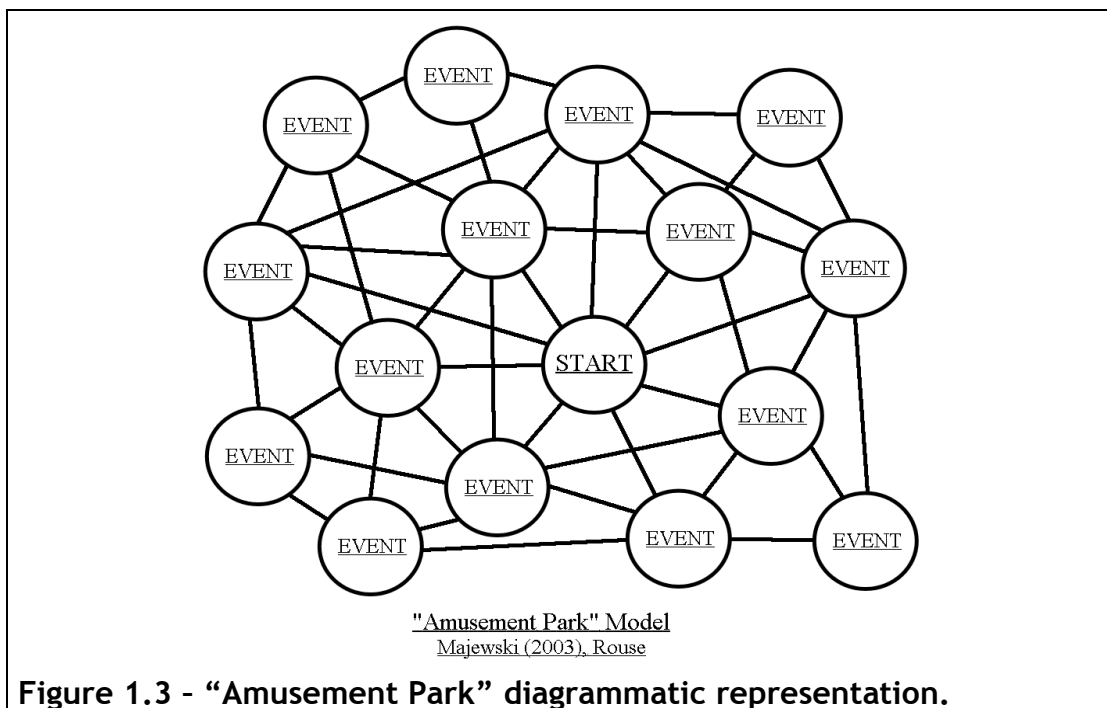


Figure 1.3 - "Amusement Park" diagrammatic representation.

## Creative Thinking

This part of the report aims to cover the thinking behind the more creative aspects of the project, particularly concerning the story and characters of the game. A lot of the creative aspects were drawn from the research (academic basis), inspirations and other sources, all of which will be explained and elaborated on here.

### Brief

The following is the creative brief provided in full; it was based in part on the guide to creative brief writing provided by Osborne (2006), with additional input from the sample creative briefs of gotomedia.com and Malone (Information Architecture Institute, 2003).

#### 1. Description of task

A narrative to pad around a series of abstract events and puzzles, inspired by various sources but willing to be imbued with originality where possible. It must be a coherent, complete story, ideally entertaining and intriguing enough to keep a player interested in the experience.

#### 2. Audience description

Based on presumptions gathered from looking at acclaimed examples of the genre, the audience is adults, with concessions to children. Given the amount of text that the game may end up having, there may be some sophisticated jokes or descriptions that might be considered “above” the understanding of children. However, taking a cue from Douglas Adams and Terry Pratchett, the project will not be seeking to develop a story that intentionally invokes an adult audience (via obscene or adult language). The similar approaches about the works of Adams or Pratchett was that although they are quite technical in their humour, there is nothing intrinsically “adult” about them - any child can pick them up one of their books (or games) and enjoy them as well. A comparative work would be *The Muppet Show*: children loved the puppets and the jokes and song they understood, and adults liked the euphemism and more sophisticated but very subtle humour. This project wants to try and encapsulate the middle ground; write for adults but without making it inaccessible to children.

#### 3. Principal purpose of the communication and objective of the piece

Although the purpose of the game, from the context of the player, is to be completed (a matter of getting from one end to the other), the actual purpose of the story and setting will be to provide an extra layer of enjoyment for the player, as research suggests that narrative progression can be a form of fulfilment for the player in itself (Bateman, 2009). Therefore, the story should not objectively be carrying a message (e.g. political, ethical) otherwise the player may feel that the story actually detracts from the experience. Although this brief recognises that text-based adventure games are, when broken down to base concepts, a series of puzzles tied together with a narrative, research further suggests that this fact should not be obvious, or even noticeable, to the player (Thurman, 2009). Ergo, the plot should weave seamlessly around the puzzles.

Furthermore, the narrative should incite some basic emotion in the player - in the very least, it should provide a source of conflict for the player to identify and work against.

#### **4. What are the supporting rational and emotional 'reasons to believe and play?'**

Interestingly, some of the more acclaimed examples of the game format actually punish the player for taking trust in it. Will Wright, lead designer at Maxis (developers of titles such as "The Sims") suggests that "failure should be fun", and this is why titles like the game adaptation of "The Hitchhiker's Guide to the Galaxy" are given as prime examples by sources such as Brooker (2009). In short, a narrative that makes a fool of the player in a deliberate, post-modern deconstructive manner could work to the project's advantage (also known as "breaking the fourth wall").

#### **5. Perception/tone/guidelines**

- Self-aware, post-modern, occasional "fourth-wall" breaking.
- Fun, quirky, perhaps even bordering on "odd".
- At least one source of conflict to incite the player into continuing.
- Not overtly adult - sophisticated humour is fine, but no expletives or crude concepts.
- Try and carry the tone of narrative across the puzzles as well!

### **Inspirations**

The creation of the narrative relied on several sources of inspiration, mostly drawn from one's own favourites in areas of gaming, literature and one's own creations. Many of the identifiable sources are as follows:

- Following the criticism of Graham Linehan of the lack of deep literature basis for modern game stories, a basis was formed around a particular area of one's interests - pulp detective novels, specifically the works of Raymond Chandler concerning his recurring private detective protagonist Philip Marlowe. "The Big Sleep" was read during the project, and several of the BBC audiobook adaptations of other Marlowe stories were listened to, all to provide flavour to the setting of the game. The main character (in this case the player) would be a private detective, and this would explain the puzzle-solving aspect of the main character.
- Sir Terry Pratchett's Discworld provided thought in terms of style of address - an acerbic, intelligent style of writing that sometimes borders on the bizarre but not to the extent of works such as those of Douglas Adams. In particular, the game "Discworld Noir" provided flavour for the game concept, as it featured a protagonist that was an amalgam of all hard-boiled detectives like Marlowe. Pratchett had a hand in the Discworld games and ensured that his type of wit was present within the story.
- The work of Douglas Adams always possesses a similar intelligent wit and wordplay to that of Pratchett, but also revels in self-awareness and subverting tropes. The text-based game adaptation of the Hitchhiker's Guide carries the same black humour to the extent that

it will mock the player for taking certain actions (e.g. attempting to quit the game to restart while the game is explaining how you died will result in the game telling you to “keep out of this, you’re dead”). Tying this with Will Wright’s “make failure fun” ethos, it seemed one positive idea towards inciting the player to continue would be to outright mock them for failure.

- The environment and art style for the project were influenced heavily by Valve’s acclaimed puzzle game “Portal”. The reasoning behind this was due to concerns around how to keep the game encapsulated within a specific environment, as well as trying to explain why said environment is host to many puzzles and traps. “Portal” takes place in a laboratory environment, where the player is tasked with progressing through puzzle rooms while under the watch of some unseen but vocal authority - this was an aspect that could equally be applied for the project’s needs, with some alterations. The choice about borrowing the clinical white art style was purely for reasons of efficiency - graphics would be a lot easier to produce in just black and white with no colour (let it be mentioned that “Portal” is not in black and white, but images for the game are based around a white signpost-type design. See Appendix 5 for an example - the lower left of the mood board shows some of the iconography used in the game).
- Another influence/inspiration for the location had been classic Batman stories of the 50s. The protagonist would frequently be caught within a building constructed to induce his demise. A common example would be the frequent appearances of a “fun house of doom”, often controlled by a colourful character like the Joker. The original idea for the game environment was a carnival or circus adapted to trap and kill the protagonist, supported by the fact that this was used as the final area in “Monkey Island 2: LeChuck’s Revenge” effectively (and also featured its own controlling antagonist in the form of a colourful undead voodoo-performing pirate). However, after considering the laboratory environ of “Portal”, the idea was adjusted to a similar setting, albeit keeping the idea of a constant antagonist controlling the area (this would also provide another source of conflict for the player on top of the mocking humour).
- Personal influences also had a feature within the project. As an amateur cartoonist, one has a repertoire of characters created for the purpose of comic-writing and drawing. One such character, an archetypical “mad scientist” personality, fit the role of antagonist really well: Dr. Ralph Smiffington III. Based on certain other characters/actors/personalities in itself (Peter Lorre, “Saturday morning cartoon” villains, Hector Lamarr from “Grim Fandango”), the character could provide a comically sinister foil for the player.
- A mood board was constructed to attempt to bring these inspirations together (as mentioned before, refer to Appendix 5 to see this). This resulted in a jarring set of imagery, as many of the detective/private investigator iconography used sharp colours, which did not match the



clean iconography of images that invoked the clinical white laboratory-esque symbolism. Utilising the mood board to try and find a middle-ground between the two was the goal of the exercise.

## Application of Inspirations

The concept for the project was as follows: the player would take the role of a private investigator on a case, and their only lead would be to investigate the sinister Dr. Labb. The game would open with the player having broken into a warehouse belonging to the aforementioned doctor and discovering that they have stumbled into a trap of the doctor's creation, designed to test and eliminate trespassers. Presented with a locked-room situation in the form of an eccentric laboratory environment, the player has to work their way forward room-by-room and trap-by-trap to try and locate Dr. Labb and question him on the case. While the player progresses, the dastardly doctor watches on voyeuristically through security cameras setup around the laboratory, sometimes offering a sneer or derogatory remark to the player when they get stuck or fail via the means of the laboratories intercom speakers. The puzzles would be part of inventions and machines scattered around the laboratory.

A blurb was created to describe the game, and this was used on the poster presenting the game:

*On a not-so-routine murder investigation, a private investigator realises that his only credible lead is a warehouse belonging to the sinister Dr. Labb. Upon breaking into the warehouse, the investigator quickly realises that it's a trap, and the building is actually the home and laboratory of Dr. Labb! At the mercy of the cackling mad scientist, you must become the private investigator, evade traps and perils and find Dr. Labb! The question isn't whether you'll get out of the laboratory, it's how many pieces you'll be in when you leave the building..."*

As well as the blurb, a concept image was created to promote the game (see Appendix 6). This image shows Dr. Labb (a renamed and repurposed Dr. Ralph Smiffington) watching the protagonist via a camera and laughing through a monitor feed. The protagonist is wearing an archetypal private investigator outfit (fedora, suit and trench coat) and a dark mask, representing that the role is to be filled by anyone (the player) to give the protagonist a "face", so to say.

All of these ideas fed a light-hearted whimsy into the project, taking many concepts and merging them into an encapsulated experience. The name, "Labb Rat", was a play on words derived from the idea that the game is a sort of human rat-run, as well as a reference to the villain of the piece Dr. Labb (hence why the character was renamed for the project).

## Development

The reasoning behind using PHP as the medium for this project includes the following:

- PHP hides the code from the client end, meaning that actions like “view source” will not reveal how the game works, which was one of the requirements of this app.
- PHP can “remember” things by employing sessions, cookies or a database connection (the latter being in the extreme long-term). Since a game often requires a trigger to be remembered (for example, if the player picks up an item it would be expected for the item to stay with the player) short-term solutions such as cookies or sessions are ideal.
- Text-based games are quite static in terms of interaction, meaning that the player needs to read the text on screen before making their next action. Due to this process of moving from static pages to performing actions, PHP with HTML can provide a solution.
- Error handling can be useful with PHP, providing that one has scripted it properly!

Development first required revision of PHP on a basic level, so an authoritative source was consulted on this matter: “Visual Quickpro Guide PHP 6 and MySQL 5” (Ullman, 2008). After conducting several examples of basic codes from the book, a script was adapted for a prototype to be shown at the post-project presentation.

## Learning

One’s main source of knowledge of how games function comes from exploration of the “Mapmaker” system within the game “TimeSplitters: Future Perfect”. The basic principles of how a game functions are as the following:

- Games use “triggers” to activate situations. For example, if the player presses a button, the game logic unlocks a door.
- You can tie several actions to one trigger to create a sequence of events.
- You can also tie an action to when one or more triggers are activated.
- Considerations must be made for when the conditions of one trigger do not become recurring, otherwise it may be activated a second time accidentally as the player activates other triggers.

Recreating the “trigger” system using PHP was a matter of utilising conditionals to react to form data input by the user e.g. “if” and “elseif” statements.

## Prototyping

Two prototypes were constructed during the project. Originally these were to be paper-based in order to be cheap, quick and efficient and allow for

quick alterations, but after considering how this would be hard to demonstrate during the post-project presentation digital mock-ups were created instead. These can be accessed on the disc under the “prototypes” directory, or by typing in the URL

<http://www.cems.uwe.ac.uk/~sppayne/dmp/prototype> from within UWE.

The first prototype is a HTML mock-up of what the game might look like, experimenting with using both graphics and text to show the game. Although the images helped support the humour of the game, they were dropped due to time constraints in later versions of the project.

The second prototype was more practical on the suggestion by module leader Dan Dixon that students should challenge themselves and create something that works for the presentation. One of the puzzles for the game was created (the jug puzzle) for the purpose of demonstration and this also provided some insights into improvements that could be made based on the reactions of colleagues trying this prototype out (basic user feedback).

### Problems Encountered

A few major problems were identified during the course of development. Solutions were found for some of these, and those problems not solved will be mentioned within the next section.

- Adding a trigger via PHP sessions revealed that the session would only update properly after a page refresh (players would be told what effect their action before last had, not the effect of the action they had just made!). Forcing a page refresh via HTML fixed this, and also provided an opportunity to tell the player what they had just done, refresh, and then describe the current situation.
- Ideal scripts for many of the puzzles would use algorithms to handle cause and effect, but this concept was well above understanding. The only obvious alternative would be to cover every possible eventuality within the scripting itself, which caused for a large amount of code but reduced the chances of producing an error by non-action significantly.
- Progression was handled by making each file a new room, meaning that each area was self-contained. This fixed the problem of having just one file handle everything and then trying to work out how to control the scripting so the events of one area did not accidentally run into another.
- One significant change to the planned development was the means of player interaction. Traditional adventure games would require the player to type in common actions and what they want to interact with in order to progress. However, during development it became apparent that handling all of the possible inputs from a text box would be very cumbersome. In order to capture and represent the common actions within the game, players are now given a drop-down menu of options as this was a lot safer to handle in terms of scripting for user input. However, this may be considered detrimental to the

overall experience as it means that the player is only choosing from a list of pre-set actions rather than making their own decisions.

## Improvements

Since from the outset the final product of this project was always intended to be a prototype, there are still numerous things that can be done to improve the game and the experience:

- The security of the game is not a high priority at the moment, as all information passed within the scripting is trivial action triggers and thus there is no sensitive information to be concerned about. Most of this is also validated to some extent, but there are always exploits and looking into this area is not something the project was strictly concerned with. That might need considering include session IDs, default PHP security settings and data handling errors.
- Proper nesting and encapsulation of code - being experimental, the scripting is very a case of being where it is needed. Some basic arrangement and annotation is present but the code layout is still very erratic in places. On top of this, functions or algorithms could feasibly be utilised to handle recurring script actions and would also reduce the amount of code as well as hiding it in internal files.
- The game does not currently have any internal memory, so saving the game is not possible. To do this would most likely require a database to store the information pertaining to what the player has/has not done, and although this would be useful as it could use a password-based system, it would certainly add more considerations for security (such as prevention against SQL injection attacks).
- Web 2.0 elements - it was suggested by various tutors that there could be room for user-generated interactions within this project. The possibility of help pages based around a comment system would certainly be plausible and could enhance the experience.
- Standards - where possible the scripted output has been kept to web standards, but there is certainly room for this to be expanded upon.
- Interface improvements - the design was always focused around providing a clean “no frills” experience, but once the main game aspect has been finished it would certainly be a benefit to go back and add images, possibly even overhaul the colours and style completely! It would also be far superior to try and change the player’s interface to the traditional text-box input to make the experience feel like the player is directly in control.
- Due to the way the game progresses (file-by-file), players can actually skip rooms if they know the file name via the URL. Although this compensates for a lack of game-save ability, measures to prevent this would be a benefit.
- Prototype feedback - most of the people who tried out the working prototype often encountered these two problems:
  - Due to the lack of graphics, they had trouble visualising the situation properly.
  - Some players would try and make their next move before the page refresh, meaning that the refresh would interrupt them.

## Conclusion

### 1. How well did you achieve your aims and objectives? (In terms of actual achievement vs. expectations)

In terms of deliverables, the personal goal of the project was always to set out to produce as much of a game as possible, but even in the proposal it was recognised that an entire game would be quite a task for one person by stating that the project would only set out to deliver a prototype. However, this was still overly optimistic, especially including the web 2.0 elements (which was only included on the basis that a tutor advised it, and was completely missed out as the main project was big enough). In producing physical products, the project produced something worth developing further in the future.

In terms of my “intangible” goals, sources were mined for information pertaining to how to produce an “engrossing” experience, but this was undermined to a certain extent of project development altering the user interface by necessity of demands of the workload of the project, changing the way the user interacts by making it not less intuitive (by giving options), but certainly less personal (by not letting players type in what they want to do). As for learning good practices of PHP coding, on reflection it would have been easier to develop this knowledge via a more conventional project that utilises a database back-end, passwords and administrative aspects, as much of the teaching available for “good practices” mainly concerns how the back-end of the website is laid out.

To amount of project that was achieved was still a personal accomplishment in terms of scale and self-management, but it almost definitely fell short of expectations.

### 2. Did you stay within the scope of the project?

The project was delivered to within the scope given within the proposal, allowing the player to interact with the in-game environment, and there are at least three puzzles that work present within it to be solved. The only concession to this is that the method of the player interacting may affect the “engrossing” aspect of the aims. The knowledge scope was kept to, but with the realisation that the needs of the project were not suited to deliver much development on this front (please see the development section for more details). Those ideas identified as being “out-of-scope” were touched upon as par for the course, but this was not a major concern.

Overall the project kept to the scope, but with the concession that the scope was not particularly strict to begin with, and was perhaps not ambitious enough from the outset.

### 3. How did the aims and scope shift during the project, if at all? Was this detrimental to the project?

As mentioned, the web 2.0 aspects of the project were completely forgotten, for better or for worse (mainly as they did not fit in to what the project was trying to achieve). It was felt that other aspects of the project (the creative/academic side) would cover this though due to the scale and depth of the research. The scope was too loose to really cite or follow in-depth, which provides a lesson for late projects one undertakes about considering the scope in detail.

#### **4. Could you have been stricter with your aims/scope? How would this have helped?**

By plotting a scope that encompassed exactly what point the research and creative aspects should stop and development should start, the project would have been controlled more efficiently. Even the timetable within the project proposal was quite loose concerning the development cycle. The aims, however, did their purpose and supported the project as a point of consistent reference.

#### **5. How did your preparation and planning help? How well did you stick to it? What other approaches could you have used?**

What planning had been made during the proposal controlled the research most effectively as it dictated what was to be learnt every week within the first half of the project. However, since the planning for development was quite vague this had a detrimental effect of not allowing time to try and fully implement all of the creative and academic ideas, so sticking to the plan at this point was near impossible as there was not much of one to begin with.

To combat this, the project could have utilised a development lifecycle basis, such as the waterfall model or the V-model, as these are structures that provide guidelines for progressing through development and would have assisted to keep on-track.

#### **6. How appropriate was the project research? Were the sources investigated well-researched?**

Research was fuelled by absorption, as the topic of the project was a personal area of interest. Although this was arguably a positive towards the insights gathered from the research, it also had several negative effects on the process as well:

- Justification given for not using more deeply authoritative sources (e.g. the works of Vladimir Propp) was that they were not entirely relevant to the project goals, but the flaw in this argument were that the research goals were vague to begin with.
- Although the research phase was heavily planned (see project proposal) and this was followed to some extent, a scope for this research phase would have prevented the project from becoming less of a creative writing exercise and more of a “media” project.

- Sources were well-researched, but as mentioned within the research section some of the sources are downright questionable in terms of having experience within games and interactive fiction. Those sources that are more reliable have been interpreted well, however.
- Many of the sources were not contested or criticised thoroughly - much of the material gathered is taken as a given.

## **7. How might the experience be tested?**

This is where the project could be further extended to have user testing considerations. Starting with the prototype as it currently stands, a phase of testing for five main areas could be conducted:

- Interaction design - basic impressions of people interacting with the prototype were that the way the game is accessed and “played” could be overhauled to be much more efficient and engaging (also providing more feedback about what is happening).
- Interface/information design - despite the “no frills” design ethic being intentional, there is always room to reconsider this and redesign the experience to be a full-colour graphic-based text adventure, which might make the whole experience more enjoyable. This could be fed by the next point.
- Qualitative aspects - in terms of how players feel about playing the game, whether it really is “engrossing” or if the story is understandable, or whether the puzzles are too hard or abstract.
- Quantitative aspects - gathered from observation, these would be concerning how long players would play before giving up, how many errors they would make, how many errors the game produces, etc.
- Bug testing - although there has been some rudimentary testing, nothing major has been undertaken in this area.

## **8. How concise and useful was the creative brief?**

The brief was reasonably detailed, but could have benefited from expansion into considerations for business context (a point that was removed within the initial project scope) on the grounds that creative briefs are a marketing tool, and without this context their usefulness suffers greatly. The brief could have been bulletined into points to be made more concise, so that points could have been referenced directly later on.

## **9. Were the sources of creative inspiration appropriate in the context of the project? On what basis were they chosen?**

Given the creative and experimental nature of the project, it would be hard to say what would make a source of inspiration “appropriate” - it would be easier to describe the literary sources as influencing the “flavour” of the work, but equally what art design was considered had its basis in other works as well. Most of the sources were chosen by personal preference, or because they contributed something new to the stew of ideas about game potentials. The final assortment of inspirations would, when placed

together, look jarring, but the project blended many of these sources together into something new and, hopefully, quirky.

**10. What creative processes or approaches were used?**

It could be said that the creative process was mostly by osmosis of preference, as there was no strict structure that was followed when devising the story of the game.

**11. How well does the project solve a problem?**

It is hard to say that the project itself solves a direct problem - the main problem identified was a subjective one (that of “what makes a good interactive story”), and hopefully this report should represent the process and though that went into answering (or “solving”) that question.

**12. Does the academic/creative focus justify the lack of focus on developmental practices?**

Certainly not, but this was just an example of where scope creep can undermine a project’s timescale.

**13. What do you feel the project has achieved?**

It has given one the confidence to know that one can be expressive through scripting mediums, and if the project does not meet conventional standards, then it should at least show a process of being experimental and trying something new!

**14. Would you carry on with the project? What would you do differently next time?**

The project may very well be continued outside of an academic context, and those considerations for improvements would be one of the first things to consider when continuing the development. If the project were to be restarted, one would certainly try and be more ambitious in scope and aims, as well as more concise with what they entail.



## References

- Bateman, C. (2009). *Positive Game Design*. Available: <http://blog.ihobo.com/2009/08/positive-game-design.html>. Last accessed 10 March 2010.
- Bateman, C. (2009). *Why You Play Games*. Available: <http://blog.ihobo.com/2009/02/why-you-play-games.html>. Last accessed 21 March 2010.
- The BBC Presents: Philip Marlowe*. 2009 Season (The Big Sleep, The Little Sister, Farewell My Lovely, The Long Goodbye). (2001-2004). BBC Radio 7.
- Chandler, R (2000). *The Big Sleep and Other Novels*. London: Penguin Classics. p2-165.
- Charlie Brooker's Screenwipe*. Gameswipe. (2010). BBC4. Thursday 1st October.
- Crowshaw, B. (2009). *Extra Punctuation: Wet* . Available: <http://www.escapistmagazine.com/articles/view/columns/extra-punctuation/6662-Extra-Punctuation-Wet>. Last accessed 18 March 2010.
- Dickinson, P. (2005). *Top 7 PHP Security Blunders*. Available: <http://articles.sitepoint.com/article/php-security-blunders>. Last accessed 5 March 2010.
- Drucker, M. (2009). *The Friendly and Honest Guide to Writing a Videogame Story*. Available: <http://uk.gamespy.com/articles/103/1034395p1.html>. Last accessed 15 March 2010.
- Free Radical Design. (2005). *TimeSplitters: Future Perfect*. [DISC] PlayStation 2. London: EA Games.
- Frogwares. (2008). *Sherlock Holmes vs. Arsene Lupin*. [DISC] PC. London: Focus Home Interactive.
- gotomedia.com. (2010). *Creative Brief Sample*. Available: [http://www.gotomedia.com/downloads/sample\\_creative\\_brief.rtf](http://www.gotomedia.com/downloads/sample_creative_brief.rtf). Last accessed 12 March 2010.
- Grant, Bizzocchi. (2005). *How Story Can Tell Games: Narrative and Micronarrative as Components of Game Experience*. Available: <http://web.mit.edu/comm-forum/mit4/papers/grant%20bizzocchi.pdf>. Last accessed 4 March 2010.
- Greene, M. (2008). 'A Word Is Worth A Thousand Pictures': *Graphics Vs Narrative*. Available: <http://kotaku.com/354664/a-word-is-worth-a-thousand-pictures-graphics-vs-narrative>. Last accessed 15 March 2010.

Hatch, C (1989). *Batman: Funhouse of Fear*. London: Ladybird. p1-11.

*Honda Advertisements*. "Cog". (2007).

Infocom. (1984). *Hitchhiker's Guide to the Galaxy*. [Online] Available from: [http://www.bbc.co.uk/radio4/hitchhikers/game\\_nolan.shtml](http://www.bbc.co.uk/radio4/hitchhikers/game_nolan.shtml). [Accessed: 9th March 2010]

Johansson, C. (1999). *The V-Model*. Available: [http://www.bucanac.com/documents/The\\_V-Model.pdf](http://www.bucanac.com/documents/The_V-Model.pdf). Last accessed 7 March 2010.

Jorwekar, S. (2009). *Waterfall - Software Development Model*. Available: <http://www.buzzle.com/editorials/3-13-2005-67039.asp>. Last accessed 15 March 2010.

Kinder, Granade. (2009). *The Interactive Fiction Archive*. Available: <http://www.ifarchive.org/>. Last accessed 12 March 2010.

Lindley, C. (2005). *Story and Narrative Structures in Computer Games*. Available: <http://intranet.tii.se/components/results/files/sagasnetLindleyReprint.pdf>. Last accessed 12 March 2010.

LucasArts. (1998). *Grim Fandango*. [DISC] PC. London: LucasArts.

LucasArts. (1991). *Monkey Island 2: LeChuck's Revenge*. [DISC] PC. London: LucasArts.

Majewski, J. (2003). *Theorising Video Game Narrative*. Available: [http://www.majewscy.net/jakub/mt\\_cont.html](http://www.majewscy.net/jakub/mt_cont.html). Last accessed 22 March 2010.

Malone, E. (2003). *Creative Brief Template*. Available: <http://aifia.org/tools/download/CreativeBrief.doc>. Last accessed 13 March 2010.

McNamara, S. (2010). *Sample Creative Brief*. Available: <http://www.adcracker.com/brief/sample-creative-brief.htm>. Last accessed 14 March 2010.

McTiernan, J. (1995). *Die Hard with a Vengeance*. [DVD]. UK: 20<sup>th</sup> Century Fox

Mosaic, Inc. (2001). *What Is The Difference Between Quality Assurance, Quality Control, And Testing?*. Available: <http://www.mosaicinc.com/mosaicinc/rmThisMonth.asp>. Last accessed 20 March 2010.

Naughty Dog. (2007). *Uncharted: Drake's Fortune*. [DISC] PlayStation 3. London: SCE.

Park, N. (1993). *The Wrong Trousers*. [DVD]. UK: BBC

Passafiume, A. (2009). *What's your story?: Exploring game narrative*. Available: [http://www.snackbar-games.com/features/editorial/whats\\_your\\_story\\_exploring\\_game\\_narrative-247.html](http://www.snackbar-games.com/features/editorial/whats_your_story_exploring_game_narrative-247.html). Last accessed 13 March 2010.

Perfect Entertainment. (1999). *Discworld Noir*. [DISC] PC. London: GT Interactive.

Pratchett, T. (2005). *Thud!*. 2nd ed. London: Doubleday. p1-50.

Schafer et al. (1997). *Grim Fandango: Puzzle Document*. America: LucasArts. p3-7.

Stock Puzzles - TVTropes.org. (2009). [Online]. Available from: <http://tvtropes.org/pmwiki/pmwiki.php/Main/StockVideoGamePuzzle>. [Accessed: 19th March 2010]

Stock Video Game Puzzles - TVTropes.org. (2009). [Online]. Available from: <http://tvtropes.org/pmwiki/pmwiki.php/Main/StockVideoGamePuzzle>. [Accessed: 19th March 2010]

Square. (2000). *Vagrant Story*. [DISC] PlayStation. London: Square.

Thurman, J. (2009). *Evolution of the Video Game Narrative*. Available: <http://www.karlonia.com/2009/07/28/video-game-narrative-evolution/>. Last accessed 14 March 2010.

Ubisoft Montreal. (2004). *Myst IV: Revelation*. [DISC] PC. London: Ubisoft.  
Ullman, L. (2008) *Visual Quickpro Guide - PHP 6 and MySQL 5*. Peachpit Press.

Usborne, N. (2006). *How to write a good creative brief*. Available: <http://www.bytestart.co.uk/content/marketing/articles/creative-brief-writing.shtml>. Last accessed 14 March 2010.

Valve Corporation. (2007). *Portal*. [DISC] PlayStation 3. London: Electronic Arts Inc.

Walker, J. (2008). *A Word Is Worth A Thousand Pictures*. Available: <http://www.rockpapershotgun.com/2008/02/04/a-word-is-worth-a-thousand-pictures/>. Last accessed 10 March 2010.

Wright, W. (2007). *Will Wright Makes Toys that Make Worlds*, [Lecture] Academic Futures. TED, March 2007.

## Appendix

The Appendices presented here are referred to throughout the report and are provided to inform and illustrate where required.

### Appendix 1 - Project Proposal Form

Name	SEAN PATRICK PAYNE
Student number	07973430
Project Title	Interactive Storytelling: Text-based Adventure Game

## Introduction

I have always enjoyed games that tell a good story, and the best ones that do this are often text-based or point-and-click games, mainly because their simplicity in appearance helps the player focus on the narrative. I have always wondered if it would be possible to create a text-based adventure game utilising PHP, and this appears to be the perfect opportunity to find out.

## Description

The project will be developed through the following deliverables – a paper prototype describing the various “game paths”, an online prototype of the proposed adventure game; obviously I would not be aiming to create a full game, I would instead hope to create an encapsulated section of the game. This section would have, at the very least, three working puzzles and several opportunities for interaction, whether it be with the environment or with an in-game character. I am currently unsure as to whether this PHP-based game will need a database on the back-end to act as a “memory”; if this is the case I will provide details of any SQL or databases created via an E-R diagram.

## Objectives

This project should assist in helping me develop skills in certain areas I currently struggle with, in particular the medium of PHP as a tool for scripting and development – the “game” aspect is to help keep my interest piqued.

### Project objectives

- Produce a text-based adventure game that is accessible online, accompanied with all the planning documents and thought-out game concepts.
- Explore web 2.0 applicable elements – I am hoping to explore the implications of creating an “AI” speech bot (that reacts to and outputs

text that is input) on recommendation from a peer, but simpler alternatives to approaching web 2.0 functions will be examined as well.

- Document the progress, seek assistance whenever required from peers and colleagues.

### Research objectives

- Develop a fully-scripted, engrossing experience that will hold a player's attention, mapping out the numerous game paths utilising actual development techniques e.g. action paths, flow diagrams. Reference previous acclaimed text-based and puzzle games and distil what makes them memorable, in order to transpose the same elements within my own project. I may also have to consider front-end implications, and how easy it will be for the player to identify with whatever interface they are presented with.
- Work on defining what separates “good” coding from “bad” coding, and what work ethic to apply to scripting. Utilise and develop understanding of scripting from exercises presented in recommended texts (see sources/references).

### Learning Objectives

- Understand the nuances and breadth of PHP as a medium – to become aware of what I can and cannot do with PHP, and produce something that can encourage my learning process as well as be interacted with. Exploration of web 2.0 practices.
- Define what will keep players interested in the game, and devise an understanding of what game concepts can be transposed at a scripting level.

### Methods, Techniques and Processes

- Paper prototyping – essential for mapping out “pathways”, and as a quick, flexible and cheap process, it will be invaluable for creating, correcting and annotating the game interface and interactions.
- Flow diagram – again, an invaluable tool for mapping “pathways”. I have found variations of this from within the game industry development and I will produce similar diagrams when planning my game, to keep things logical and contained.
- User-testing - this will take the form of co-operative evaluation, as well as acting as a rudimentary bug-testing session. By presenting the user (or “player”) with a task e.g. a puzzle to solve, I will see whether they can solve it without being hindered by bugs, the interface, misunderstood text, etc.
- Competitive analysis – the narrative will need to be the USP (Unique Selling Point) and will have to engross the player. Examining other

examples of interactive fiction will assist in defining exactly what provides a good game narrative.

## Resources and support required

- Apache – this software provides the necessary “local” server environment that I will need to run a PHP file. This has already been installed on my home computer, via XAMPP.
- Hosting - presumably while within UWE this will be on my on my web-space, but I could consider alternative hosting at a later date.
- Advice – from tutors, my Digital Media Project tutorial group and from friends knowledgeable in web-based coding. Ideally, if I come across an obstacle in my project I cannot work through, I can contact someone for help immediately.
- Time – this should be managed effectively, the first step being the task plan at the bottom of this document. Tutors will be able to keep tab on my progress via a blog I intend to keep updated. Details of where to see this blog will be confirmed with my tutor once groups have been set.

## Sources and references

The first half of the project will mostly be examining the narrative side of the game: what existing titles bring to the format, how they keep a player's attention and how they rate in terms of difficulty and interactivity. The second half will require exploration of tutorials and texts on development, in particular using PHP – this may entail working on smaller exercises and building upon them.

- Adams, D. (1984). *Hitchhiker's Guide to the Galaxy Infocom Adventure*. Available: <http://www.douglasadams.com/creations/infocomjava.html>. Last accessed 13 October 2009.
- Bateman, C. (2009). *Why You Play Games*. Available: <http://blog.ihobo.com/2009/02/why-you-play-games.html>. Last accessed 13 October 2009.
- Bates, C. (2006) *Web Programming – Building Internet Applications* (Third edition). J. Wiley and Sons Ltd.
- Grant, Bizzocchi. (2005). *How Story Can Tell Games: Narrative and Micronarrative as Components of Game Experience*. Available: <http://web.mit.edu/comm-forum/mit4/papers/grant%20bizzocchi.pdf>. Last accessed 12 October 2009.
- Hargreaves Heap, Varoufakis (2004). *Game theory: a Critical Text*. 2nd ed. London: Routledge. p31-36.
- Kinder, Granade. (2009). *The Interactive Fiction Archive*. Available:

<http://www.ifarchive.org/>. Last accessed 12 October 2009.

- Lindley, C. (2005). *Story and Narrative Structures in Computer Games*. Available: <http://intranet.tii.se/components/results/files/sagasnetLindleyReprint.pdf>. Last accessed 12 October 2009.
- Passafiume, A. (2009). *What's your story?: Exploring game narrative*. Available: [http://www.snackbar-games.com/features/editorial/whats\\_your\\_story\\_exploring\\_game\\_narrative-247.html](http://www.snackbar-games.com/features/editorial/whats_your_story_exploring_game_narrative-247.html). Last accessed 13 October 2009.
- Ullman, L. (2008) *Visual Quickpro Guide - PHP 6 and MySQL 5*. Peachpit Press.

## Monthly project plan

October	<p><b>Set deadline - 15<sup>th</sup> October - Submit Proposal</b></p> <p>23<sup>rd</sup> October - Establish what makes a good game narrative, what will draw returning players to what might be considered an archaic game format, begin plotting out narrative ideas for my game.</p> <p>30<sup>th</sup> October - With references to existing text-based games, begin listing puzzle types that can be recreated. Start plotting out action/dialogue paths. Investigate "AI" speech bots. Work on narrative.</p>
November	<p>6<sup>th</sup> November - Continue work from previous week, incorporating investigation/references to existing material when needed.</p> <p>13<sup>th</sup> November - Begin preparation of poster presentation: converting action paths into lo-fidelity prototypes, rudimentary interface creation (via graphics), a blurb to summarise and "sell" the project.</p> <p><b>Set deadline - ? November - Submit poster</b></p> <p>20<sup>th</sup> November - Presuming that the poster is due at the end of the month, finalisation of poster presentation will take place here. If poster has already been presented, feedback will be taken from the session and reflected upon, possibly a more detailed action plan developed to act upon the aforementioned feedback. If action paths have not been tied up into a finalised point, the narrative and game progression will need to be finalised soon. Completion and submission of project progress form if possible.</p> <p>27<sup>th</sup> November - See previous entry: these dates will be affected by the given date of the presentation.</p>

<p>December</p>	<p>4<sup>th</sup> December - I am leaving this week as a buffer for the previous two weeks - I am given to understand that mapping the game may well be quite a large task so, if for whatever reason the mapping has not been finished, this will be the point-of-no-return for finalisation. Similarly, the plot should have been finalised as well.</p> <p>11<sup>th</sup> December - Experimentation with PHP as a medium for creating a text-based game. Small exercises carried out that can be built upon, simple coding and concepts. Familiarisation with the Apache "localhost" environment.</p> <p>18<sup>th</sup> December - Continuation of the previous week's exercises. Consultation with tutor if necessary if beginning of PHP experimentation presents problems. Possibly some exploration into details of "AI" speaking bots.</p> <p><b>Semester 1 ends 20<sup>th</sup> December</b></p> <p>Christmas Period - if possible, further experimentation and exploration of producing an interactive version of the game. If my planning for this transition to producing/coding/scripting appears to be vague, this is because my expertise with PHP is, at best, lacking. This project is also an opportunity to explore and develop my skills with PHP.</p>
<p>January</p>	<p><b>Semester 2 begins 25<sup>th</sup> January</b></p> <p>29<sup>th</sup> Jan - Development should be well underway. There should be some interactivity by this point, possibly the foundations of the game component in development. As these months may be quite vague in planning within this proposal, this week will be the time to create a new, more informed action/task plan to be presented to my designated tutor.</p>
<p>February</p>	<p>5<sup>th</sup> - 26<sup>th</sup> February - Continuation of development. See previous date for actions to be taken due to vagueness of this description.</p>
<p>March</p>	<p>5<sup>th</sup> March - "In-house" testing, possibly some user/bug testing amongst a select group of "gamers". Begin project write-up as advised in supervision tutorials.</p> <p>12<sup>th</sup> March - Tidying the final output, continuation of project write-up.</p> <p>19<sup>th</sup> March - Finalisation of project write-up.</p>



	<b>Set deadline - 25<sup>th</sup> March - Final hand-in</b>
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## Appendix 2 - Progression Report Form

Name	SEAN PATRICK PAYNE
Student number	07973430
Project Title	Interactive Storytelling: Text-based Adventure Game

## Marking breakdown

Academic Content	15 - 20%
Technical Content	7 - 20%
User Thinking	3 - 20%
Creative Content	15 - 20%

## Final Project Scope

The scope I present here has been assembled from notions brought about from my extensive research (available to view at my blog at <http://uwe07973430.blogspot.com/>), which has thus far included the following:

- I have gathered recommendations from a variety of sources that provide an idea of what makes a “good” game narrative and what draws players back to playing the game.
- After researching a number of puzzle archetypes, I have selected which ones I would like to try and recreate in my game.
- The game has been mapped in an appropriate format based on game concept sketches of acclaimed game developer Tim Schafer (et al).
- Two lo-fidelity prototypes have been created to represent the game (one paper-based, one a html mock-up), a rudimentary interface has been decided, a blurb to “sell” the game has been devised and a prototype of a puzzle has been created – some of these will be shown during the poster presentation on the 11<sup>th</sup> December.
- AI speech bots have been investigated, and have now been removed from project possibilities due to their complexity and irrelevance to the project deliverables.

## In Scope

- The primary deliverable is an online prototype version of my text-

based adventure game (accessible within UWE) – being a prototype, this may not be a complete experience, but my proposed goal is to complete at least three working puzzles and have several opportunities for the player to interact with the in-game environment via various commands e.g. “get teapot”, “look at poster”, etc. Other deliverables include the various materials used in devising the game e.g. paper prototypes, diagrams. Difficulties in providing the primary deliverable by the deadline include the following:

- Time constraints – as mentioned in the module section of Blackboard, an estimated 80% of coursework will be due next year. I shall have to take care not to overlook the amount of deadlines I will be working towards next year.
- Learning – the process of learning a scripting language is not something that can be done easily, as it is not just a case of sitting down and reading a book. If I get stuck with any part of my project, I will consult either my tutor or seek advice from other module tutors who possess knowledge of PHP.
- The project is an exercise in learning PHP – its limits, adaptability and best practises. Documenting my process of interacting with PHP scripts will be reflected in the project blog, which is a logbook of sorts. My experiences during the project will also be documented in the final report.
- As part of the development, I intend to learn of good practices in PHP and try to apply them to my project, for example:
  - Security – can players affect the game mechanics? Is data sufficiently hidden?
  - Well-formedness – is the code readable? Is every file annotated? Is code nested appropriately?
  - Reuse of code – are my PHP files bloated with code, or do they reuse functions? How can I streamline the scripting underlying my game?

### Out of Scope

- It is not an extended usability test, and thus any testing that will be carried out is for purposes of testing the durability of my game scripting.
- The appearance of the user interface is not a primary concern – rather it is the quality of the story and the scripting that is the focus of this project.
- Elements concerning “business context”, what shapes the game's purpose (i.e. what possible use it might present as profitable content). Rather this is a theoretical situation wherein the game is being created for an unspecified purpose – the subject of my project is more of a

framing device than a tangibly realistic situation to work within.

- As mentioned before, AI or speech bots have been removed as a viable aspect of the final deliverable for the time being.

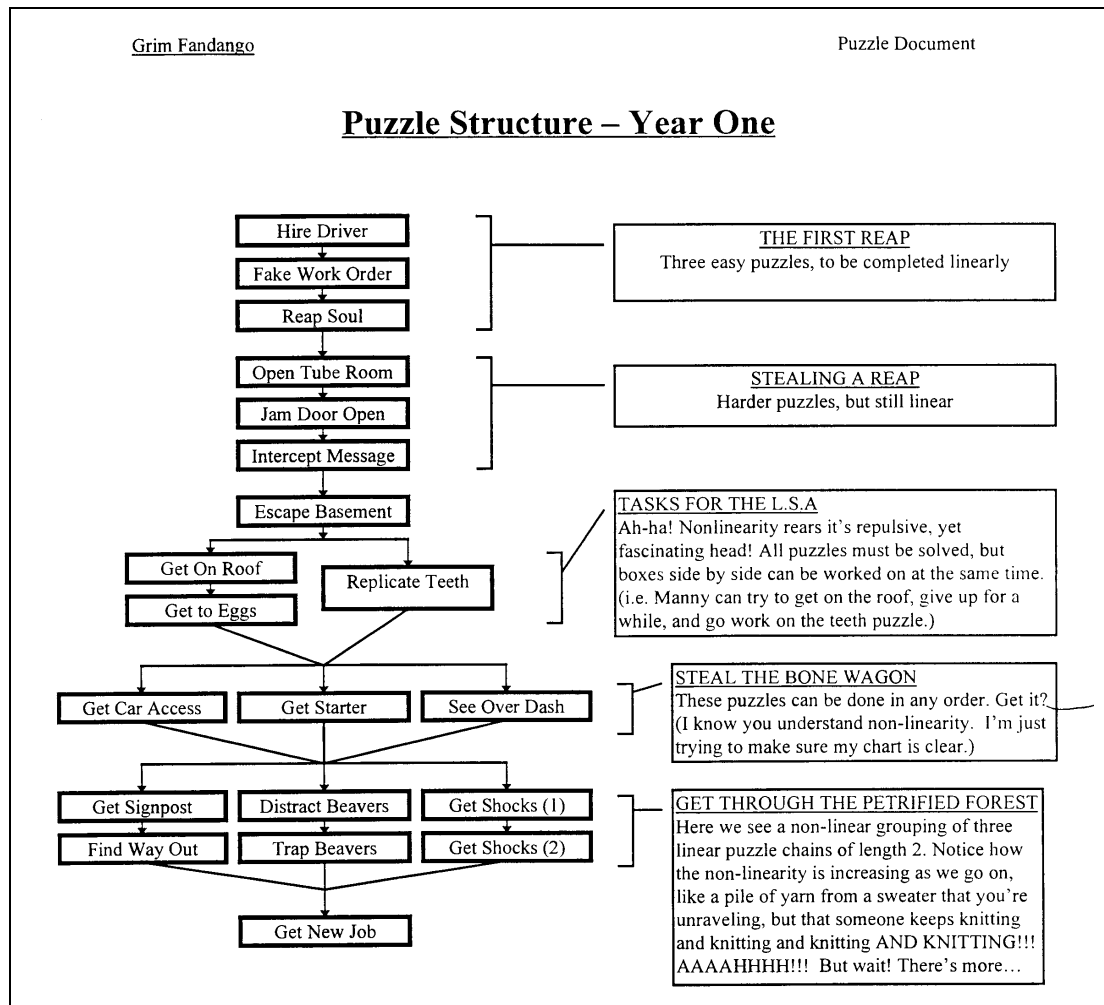
## Project plan

Taken from the monthly project plan presented in my project proposal:

December	<p>11<sup>th</sup> December - Experimentation with PHP as a medium for creating a text-based game. Small exercises carried out that can be built upon, simple coding and concepts. Familiarisation with the Apache "localhost" environment.</p> <p>18<sup>th</sup> December - Continuation of the previous week's exercises. Consultation with tutor if necessary if beginning of PHP experimentation presents problems. Possibly some exploration into details of "AI" speaking bots.</p> <p><b>Semester 1 ends 20<sup>th</sup> December</b></p> <p>Christmas Period - if possible, further experimentation and exploration of producing an interactive version of the game. If my planning for this transition to producing/coding/scripting appears to be vague, this is because my expertise with PHP is, at best, lacking. This project is also an opportunity to explore and develop my skills with PHP.</p>
January	<p><b>Semester 2 begins 25<sup>th</sup> January</b></p> <p>29<sup>th</sup> Jan - Development should be well underway. There should be some interactivity by this point, possibly the foundations of the game component in development. As these months may be quite vague in planning within this proposal, this week will be the time to create a new, more informed action/task plan to be presented to my designated tutor.</p>
February	<p>5<sup>th</sup> - 26<sup>th</sup> February - Continuation of development. See previous date for actions to be taken due to vagueness of this description.</p>
March	<p>5<sup>th</sup> March - "In-house" testing, possibly some user/bug testing amongst a select group of "gamers". Begin project write-up as advised in supervision tutorials.</p> <p>12<sup>th</sup> March - Tidying the final output, continuation of project write-up.</p>

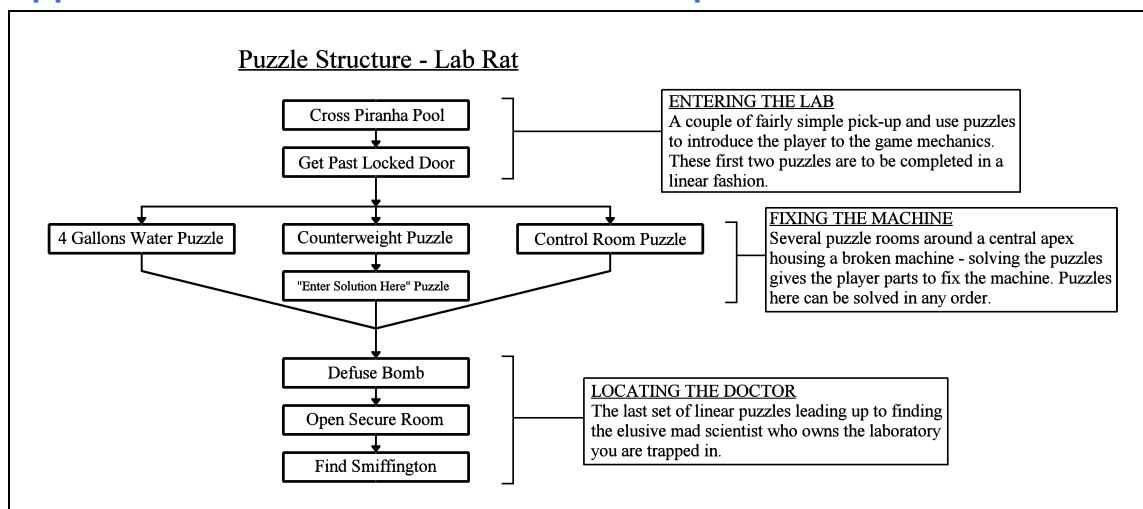
	<p>19<sup>th</sup> March - Finalisation of project write-up.</p> <p><b>Hand-in 25<sup>th</sup> March</b></p>
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## Appendix 3A - Puzzle Structure Map from LucasArts Design Document

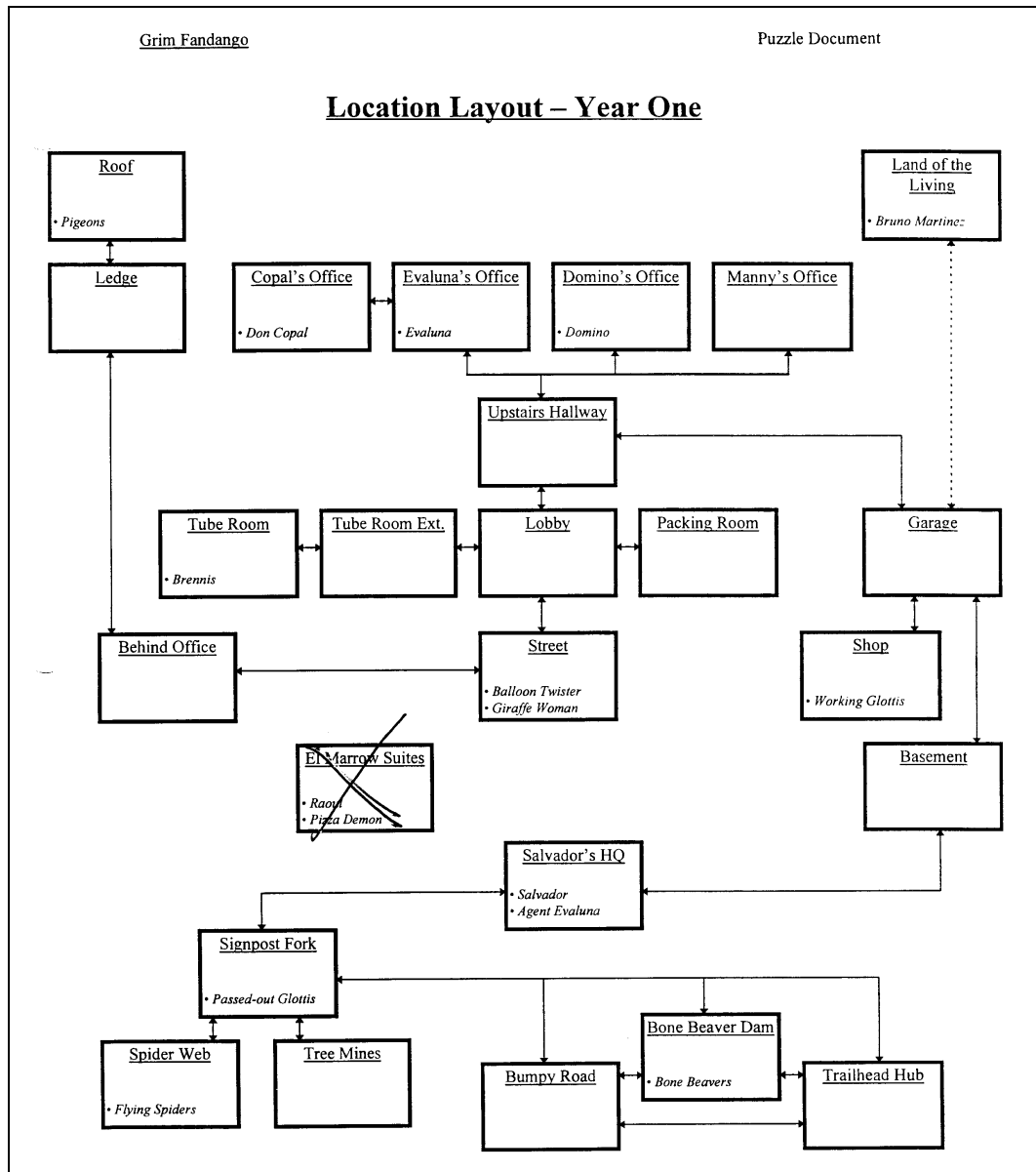


From "Grim Fandango Puzzle Document" - Schafer et al. (1996).

## Appendix 3B - The Puzzle Structure Map for Labb Ratt

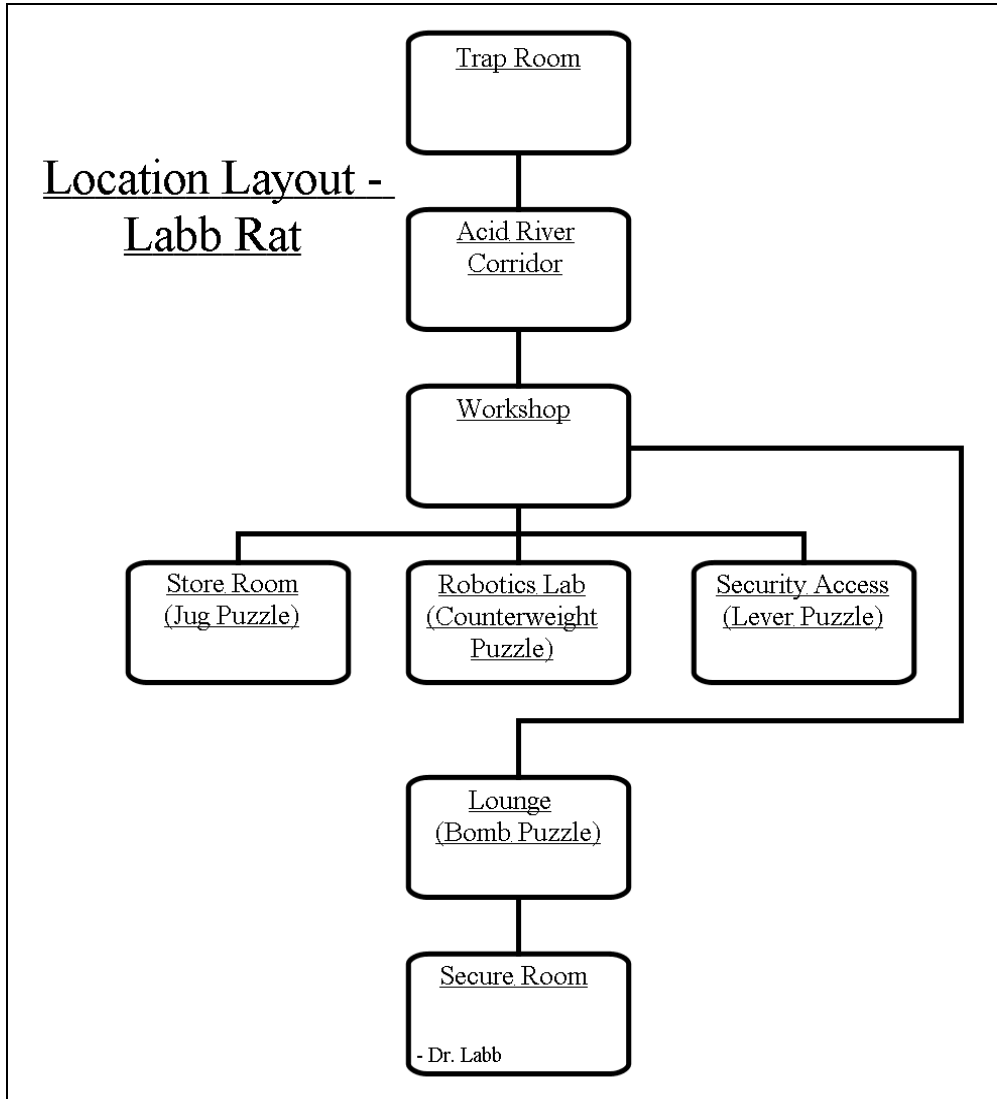


## Appendix 4A - Location Layout Map from LucasArts Design Document



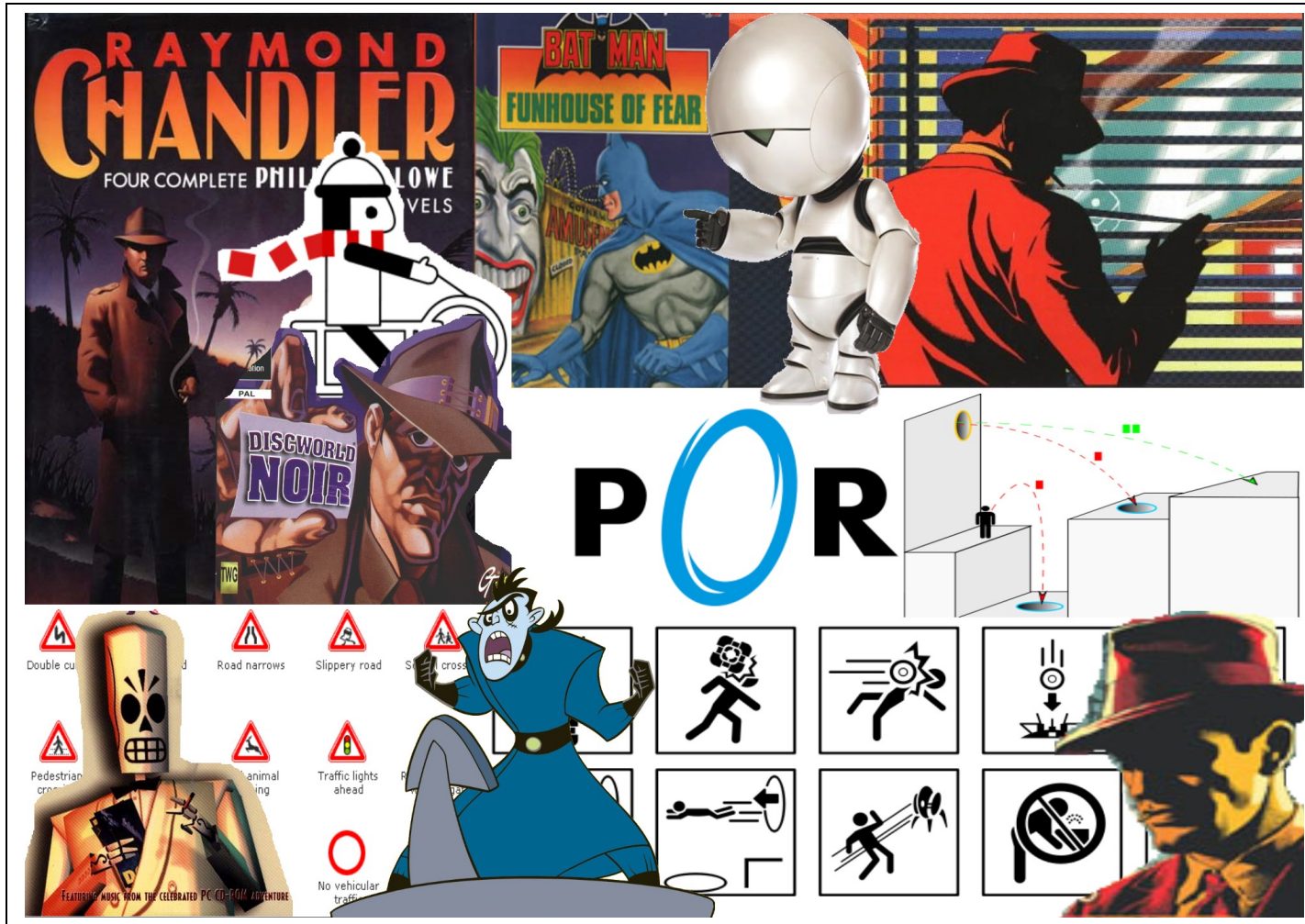
From "Grim Fandango Puzzle Document" - Schafer et al. (1996).

Appendix 4B - Location Layout Map for Labb Rat





Appendix 5 - Project Mood Board



Appendix 6 - "Labb Rat" Concept Image

