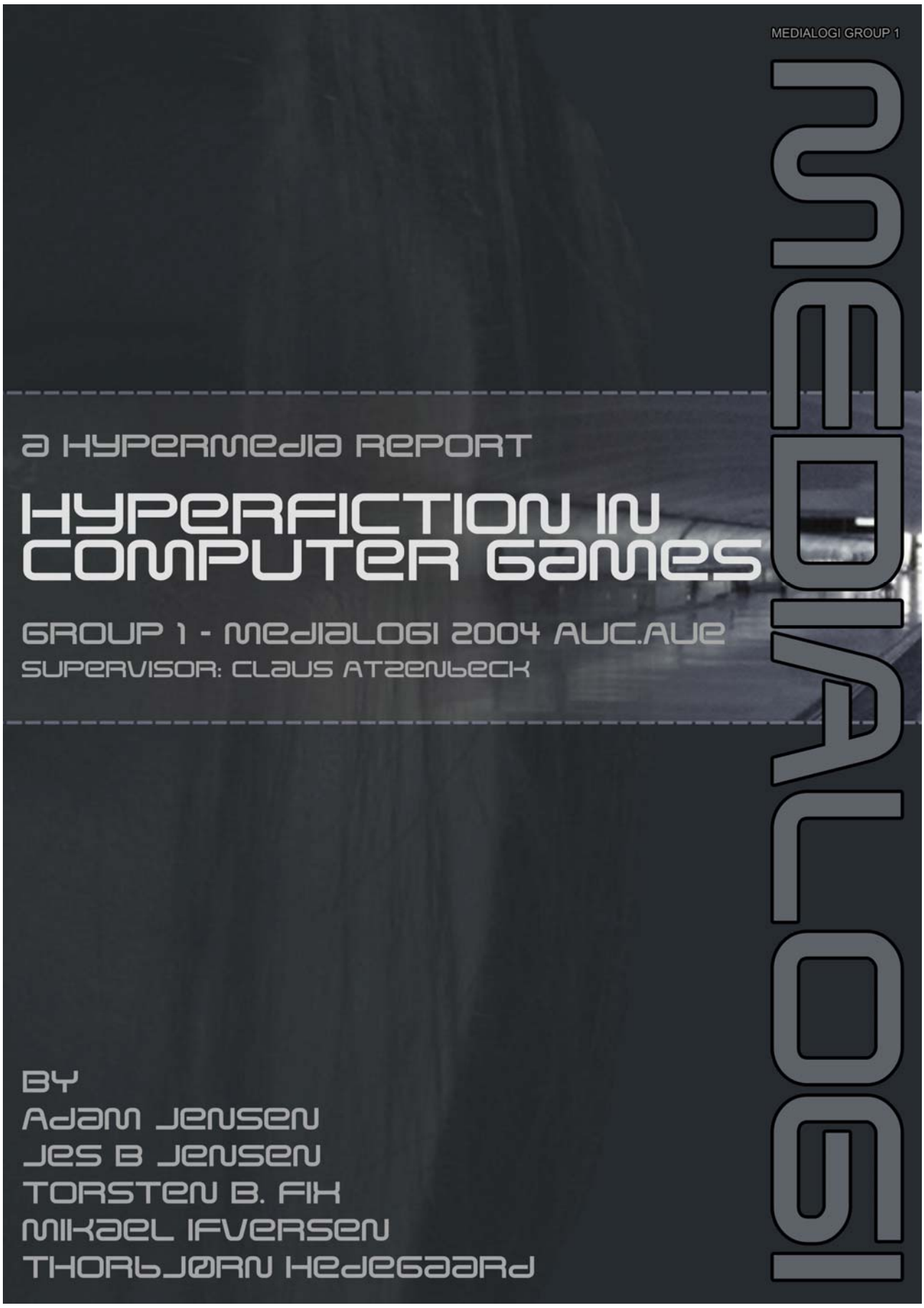
MEDIALOGI GROUP 1
MEDIALOGI
A HYPERMEDIA REPORT
HYPERFICTION IN COMPUTER GAMES
GROUP 1 - MEDIALOGI 2004 AUC.AUE
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Abstract

In this report we will be looking at qualities to found in hypertext and hyperfiction in the matter of textuality, and patterns of those Mark Bernstein has developed. We will use the gained knowledge to analize the game *SleepWalk* in the conjunction to a hyperfiction game and thereafter try to 'predict' what the future of hyperfiction might bring.

Keywords: *Hypertext; hyperfiction; textuality; hyperfiction game*

1. Introduction

The work in this report is based on the knowledge obtained from lecturers in the course of hypermedia at AUE spring 2004 and the combined research references of the group members listed in the references section of this paper.

This hypermedia project is a theoretical work with outset in the structure and design of the non-linear computer game Sleepwalk. Since the game is currently under development and changing as we speak, we will in this paper refer to the basic idea from which we outlined our game design, regardless of changes that might occur in the process of realizing the game.

The problem area of our project is: *Can our computer game (SleepWalk) be seen as a work of hyper fiction?*

We will answer this question and establish a connection between hyperfiction and computer games by analyzing our own game design in conjunction with existing hypertext theories.

By focusing on patterns and structure in hypertext as mentioned e.g. by Bernstein in the paper *"patterns of hypertext"* this paper will in a similar fashion break down the structure of our game and investigate hypertext patterns as a narrative tool.

Likewise will the game elements be analyzed in terms of textuality by using the seven-standards obtained from lectures in hypermedia. This is seen in the light that game elements can pass as text.

Associations are another important aspect we want to uncover. We will look at the separate text units by it self in terms of implicit and explicit associations as well as the different stages in the game. Are there associative connections in the way you navigate in the game and in the way the environment in the game is changing (associative links)? Is this comparative with structures in hyperfiction?

2. What is hypertext?

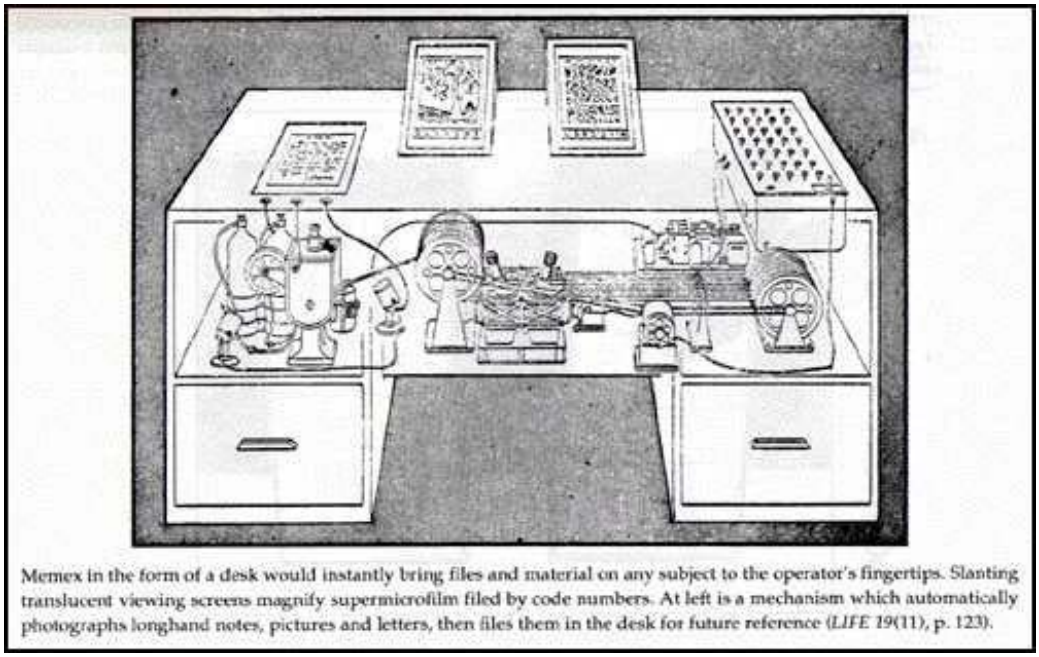
In this section of the report we will describe the fundamentals of hypertext.

2.1 Historical perspective

The term "hypertext" was originally coined by Ted Nelson. Nelson defined the term as "computer supported non-sequential writing." in the 1960th. *(Christopher Keep, 2000)*

But already in 1930th Vannevar Bush were developing the Memex (memory extension). With the Memex, Bush set down the fundamental concepts of what Ted Nelson later call hypertext. It was the article *"As We May Think"* from July 1945, Vannevar Bush described the Memex, basically the Memex would allow human memory to be augmented by mechanical *means (Vannevar Bush, 1945).*

Figure 1 – Vannevar Bush – The Memex



Memex in the form of a desk would instantly bring files and material on any subject to the operator's fingertips. Slanting translucent viewing screens magnify supermicrofilm filed by code numbers. At left is a mechanism which automatically photographs longhand notes, pictures and letters, then files them in the desk for future reference (*LIFE* 19(11), p. 123).

Ted Nelson used the Memex and the statements of Vannevar Bush as inspiration for the development of hypertext.

Ted Nelson, Engelbart etc. expected a lot of the hypertext systems back in the 60's & 70's. At this early state, the hypertext pioneers used definitions such as:

"...new paradigm for information mgt..."
"...single, consistent, coherent, universe of documents..."
"...seamless access to information..."
"... Information always readily available at your fingertips..."

Today the biggest hypertext system we know is the Web. But does it use all the advantages of hypertext? No - there are a lot of other systems which doesn't reach the normal user because of the popularity of the web, and this can be a great thread for further development of hypertext systems.

2.2 Definition of hypertext

Hypertext is a non-linear digital representation of information which basically consists of nodes that are connected in a structure by anchors and links
Hypertext documents can also contain other media besides text. Anything which is an artifact has a function in a group and a code relating to its meaning, are considered as text.

Hypertext can be divided into many structure domains. A '*structure* domain' is defined by a coherent set of abstractions solving a particular organizational problem."
We will shortly describe the most common domains:

- Navigational structures
- Spatial structures
- Taxonomic structures

Navigational structures:

Navigational structures consist of Nodes & links (anchors). This structure is based on the following principle:

Node 1 (page) – link (anchor) – node 2 (page arrival)

We know this structure very well from webpage, help files etc.

Spatial hypertext structures:

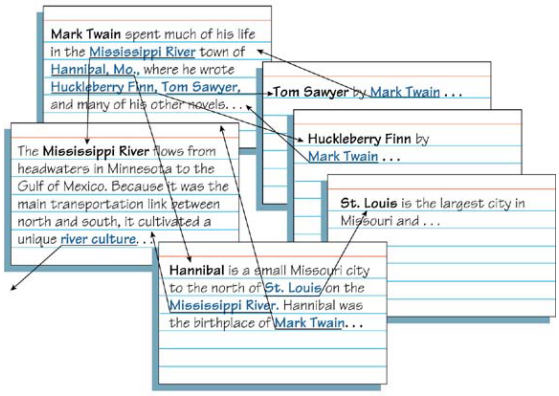
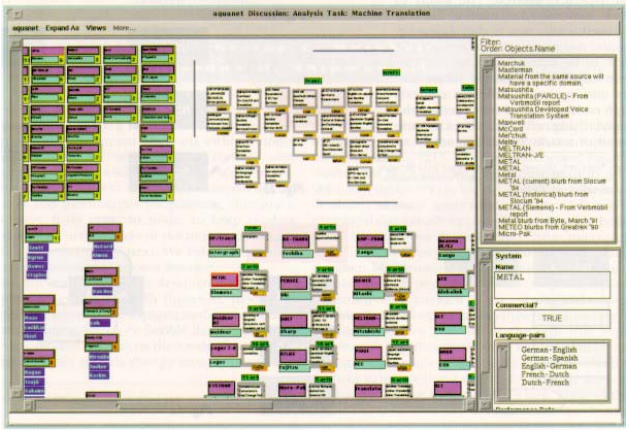
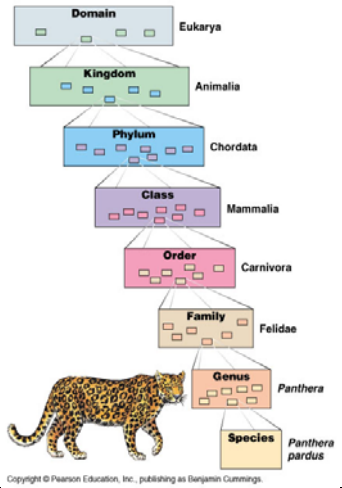
Spatial hypertext structures consist of visuals & compositions. In spatial structures the associations between colours, organisation (gestalt), size, shapes and overlapping are functioning as the links between the nodes.

Taxonomic structures:

Taxonomic structures are hierarchies. Taxonomy is a classification of information

Depending on the task, each of these structures has their own advantages. Remember that these structures also can be used mixed.

Table 1 – Hypertext structure domains

Navigational structures:

Spatial structures:

Taxonomic structures:


1 Table – Hypertext structure domains

2.3 Textuality and hypertext

With the use of De Beaugrande [Beaugrande] and Dressler's seven standards of textuality:

cohesion, coherence, intentionality, acceptability, informativity, situationality and intertextuality, we will apply a theoretical analysis of the textuality in hypertext. As an example we will use a hypothetical hypertext document written with html mark up language for the World Wide Web, in short a webpage.

Cohesion: Cohesion is about the relation between the elements in a given node as well as between nodes. Cohesion exists in the paratext. Since paratext is the combination of peritext and epitext this can be illustrated in our fictive example by adding an always visual top bar to our document, this we consider a peritext and as such it can contain some meta data such as company logo, colours etc. An epitext can be the alt text that describes graphic content in an html document or the text that appear when using typed links.

Coherence: Coherence is obtained by a joint effort of reader as well as writer. The text itself only creates meaning or coherence by the cognitive progress created in the reader when you successfully combine the writer's knowledge of writing a text and the reader's knowledge of reading a text [Schott]. Coherence works in our fictive example case on two levels, first locally on each node where the different text parts has to work together within some meaning full context logic and second on a global level where the same sense of logic have to apply between the nodes within the hypertext.

Intentionality: The intention of the author should pass through the document to the reader. One problem to this can arise by the use of different nodes not written by the same author. It is one of the pitfalls of the world wide web that the linkage between nodes disturbs the intentionality by linking different authors out of there original context.

Acceptability: About the ability of the text with all the cohesion and coherence to create some kind of relevance in the reader. We can clarify this with the help of Grice's conversational maxim [Gibbon].

- Quantity
    1. *Make your contribution as informative as required.*
    2. *Do not make your contribution more informative than is required.*

  This relates in hypertext to the meta data and the users data of the structure, i.e. it could be the alt text in the graphics content, the text in the typed links and a site map of the hypertext.
- Quality
    1. *Do not say what you believe to be false.*
    2. *Do not say that for which you lack adequate evidence.*

This can be measured by the quality of the links, e.g. in the search for information to this text I encountered a variety of dead links which in terms render the quality of the mentioned sites as very low.

- Relation
    1. *Be relevant.*

  Give the user the information which he wants. An example of this related to the web could be Amazon.com where your previous visits and actions determine the present information you are presented with.

- Manner
    1. *Avoid obscurity of expression.*
    2. *Avoid ambiguity.*
    3. *Be brief.*
    4. *Be orderly.*

  Related to hypertext this means that a link should clearly be defined at its anchor, this goes for both the destination as for the content.

Informativity: Measures whether the presented text is new and unexpected. Conflicts between cohesion and coherence increase predictability which in terms can lower the level of information as to just state the obvious which again is to no use for the reader. This can be illustrated by the well known situation when searching the web and you get an interesting search result according to the meta data but then reach a page that not at all live up to the expectations provided by the search.

Situationality: Refer to the relation between the text, the subjectivity and the attitude of the reader and the environment. A healthy feedback between the three factors means that the text performed well [Endres-Niggemeyer]. In a hypertext system an adaptive system will increase the situationality for the user by creating a desired environment.

Intertextuality: Text can only be interpreted with the knowledge of one or more previously encountered texts.

According to Heinz Vater it is sometimes possible that only coherence is presence in order for something to be a text [Schott, 2001].
With that in mind we now have an analytical tool in regard of textuality in the game SleepWalk.

Since hyperfiction in essence is a structure of a specific hypertext the parameters used to analyze a text in case of textuality will be the same for any given hyperfiction structure including our game sleepwalk.

2.4 What is hyperfiction?

Hyperfiction is the act of presenting a story to the reader in a non-linear fashion. Some hyperfiction projects present a traditional narrative story but in a cyclical fashion that are letting the player determine where the story will begin and where story will finish. [Jason Pettus, xxxx]
In hyperfiction each path (story) is unique; this might create problems for the readers ability to understand the text because there can be weak coherence in specific paths.
Because of this risk it is very important for the author to be extra careful in the authoring process.

The difference between writing a novel and writing hypertext is essentially simple, but of crucial significance. In order to write hypertext, an author needs a fundamental understanding of the computer, plus an understanding of its applications. Thus only a select group of people can even write hypertext, much less write good hypertext.

2.5 Hyperfiction in computer games

A computer game is an interactive event, which is based on a set of defined rules and consists of an evaluation of the player's contribution. In interactive fiction the player must be active, make choices and use his imagination.

What is Interactive Fiction? Just what it says: it's a story in which the player can interact. Sometimes "interaction" means solving problems and bringing the story to its resolution by overcoming the roadblocks. Sometimes it means more than that. Commercial adventure games are one form of interactive fiction. They tend to be quite cinematic, complete with voice acting, immersive 3d graphics, and a transparent-as-possible mouse interface.

It is important to separate hyperfiction and computer games, they are not the same. But hyperfiction can be used in computer games tell to stories. The most popular and known computer game based on hyperfiction is Myst, the central part of Myst is the story, according to the player it is more than just a normal action game, according to which path the user chooses he/she creates there own narrative structure.

Myst starts with almost no instruction. You begin the experience with a brief cinematic introduction, which attempt to explain why you are placed on the island of Myst.

From there, the rest is essentially up to you. The introduction is used to motivate the player; according to the development of narrative computer games it has been quite popular to present the viewer for a cinematic introduction.

The interface is very intuitive and very simple. The player navigates across and around the island by clicking in the direction he/she would like to move. That is, to move forward, you click on the top of the screen and so forth. This simple interface could be likened to the effortlessness of ludic reading: the process by which one explores becomes secondary to the exploration itself. In this way, the effortless absorption inherent to pleasure reading is mimicked in hypermedia [Nell].

There is no doubt that hyperfiction can be a very useful tool in computer games, but unfortunately only a little part of the many computer games released every year incorporate in this way the media.

2.6 Patterns in hyperfiction

In 1998 Mark Bernstein suggested that there are patterns in hypertext linking, Bernstein identified and named different patterns by observation.

Since large linked constructs cannot be wished away, it is time to develop a vocabulary of concepts and structures that will let us understand the way today's hypertexts and Web sites work. Progress in the craft of writing depends, in part, on analysis and discussion of the best existing work. An appropriate vocabulary will allow us both to discern and to discuss patterns in hypertexts that may otherwise seem an impenetrable tangle or arbitrary morass. The player's experience of many complex hypertexts is not one of chaotic disorder, even though we cannot yet describe that structure concisely; the problem is not that the hypertexts lack structure but rather that we lack words to describe it. "

[Bernstein, 1998]

Bernstein identified multiple ordinary structural patterns that could be useful for description and analysis. Furthermore his identification of patterns could inspire hypertext developers to design complex hypertext.

Bernstein's categories concern different aspects of hypertext. Cycle and counterpoint have clearly to do with the shape of the underlying map of nodes and links and can be described as structural or

syntactic patterns. But the difference between counterpoint and mirrorworld is more of a thematic or semantic nature: counterpoint means two alternating voices talking about different topics, while mirrorworld means different perspectives on the same world. Montage is mostly a matter of visual presentation and seems compatible with various types of map structure. [Karin Wenz]

For a better understanding of the patterns in hypertext we have used Karin Wenz categorizing of Bernstein's patterns to different levels of hypertext.

Table - Mark Bernsteins Patterns in hypertext [Karin Wenz]

Structural Patterns	*Thematic Patterns*	*Visual Patterns*	*Expectational Patterns*
Tangle	Counterpoint	Feint	Feint
Cycle	Montage	Montage	Missinglink
Sieve	Mirrorworld		
Split/ Join			

Because we are of that conviction that the patterns Bernstein (1998) defined can be used and has been used in computer games we will shortly describe these patterns in the following text. The illustrations of each pattern are from the Eastgate Inc. website.

Cycle

A cycle occurs when the player returns to a previously visited page, stage, level etc. When a previously visited level is encountered, the player can, of course, re-enter the cycle and follow the same trajectory once again. To depart along a new path, or to break the cycle, the developer may offer secondary nodes.

Bernstein refers to these nodes as 'breadcrumbs', allegorizing the developer's possibility to lead his audience out of the cycle. Some of the patterns are exclusively applicable to interactive fiction, as Bernstein stated in his introduction.

Partly this is true for *Joyce's cycle*, because here visiting a previously encountered scene may place this scene into a new context, changing the meaning of a passage while the words remain exactly the same.

A specific cycle is presented as *Douglas's* cycle, where recurrence appears at the end of a hypertext section, informing the player that every page has been visited and there is no more to be found.

Web rings are well known cycles of thematically related hypertexts, connected 'head-to-tail'. Every participant in the web ring offers one outbound link, connecting to the next relevant site on the subject.

A *contour* occurs when multiple cycles are interconnected, giving the possibility to navigate freely through these cycles. [Wouter Hager, 2001]

Counterpoint

"In counterpoint, two voices alternate, interleaving themes or welding together theme and response" [Bernstein, 1998]. A counterpoint is given by the two voices that alternate in the poem. A third voice is added by using elements (as background colour of one voice and text colour of the second) to highlight the convergence of both voices, as they seem to merge in the second part of the poem. Another possibility to differentiate between both voices is layers that are used in one and the same lexia to maintain the closeness spatially by dividing the voices at the same time[Wouter Hager, 2001].

Mirrorworld

Mirrorworld's are parallel, narrative or intertextual lines, which echoes one theme more in depth. The mirrorworld are added to the poem consists of passages from Walter Benjamin's work and documentary material about the holocaust, which both add new voices to the poem. The mirrorworld offers a possibility of entering and leaving a new space, which leads to an exploring behaviour more than it supports close reading [Wouter Hager, 2001].

Tangle

The tangle offers a variety of links without specifying information where the link is pointing to.

Therefore tangles lead to a disorientation of the player. An example of tangle could be an image map that has the structure of the tangle. It offers several possibilities of links without guiding the player or offering any information where to start. The tangle supports the search strategy of browsing through the text. [Wouter Hager, 2001].

Sieve

The sieve is a navigational structure that provides the player with a series of nodes to different

sections/levels of a game or entries to other hypertexts. Sieves are usually trees, but can also regrettably be multi-trees, where the apparent golden rule in non-fictional hypertext design of 'three clicks away' is violated[Wouter Hager, 2001].

Montage

The montage, which opens up several writing spaces at once, is a possibility to highlight a motif or a metaphor used in the text. Montage is used here to focus the user's attention and to develop a special motif in depth. This complexity supports a closer reading of the lexia instead of a browsing activity.

When several distinct writing spaces are displayed at the same time (for example in frames or superimposed windows) Bernstein speaks of montage. The identity of a mounted writing space can either be partly or strictly navigational. But even more so dead ends or *cul-de-sacs* can come to their full potential in montage, because the player does not necessarily have to leave the main thread[Wouter Hager, 2001].

Split/Join

If the player is presented a choice among several nodes, the path he/she has been following is split into multiple paths to choose from. In a split/join pattern these multiple paths eventually rejoin again at one single page. Either way the player initially went, this page, stage or level is always returned to.

A split/join may be very simple, containing a split with only two nodes to choose from, after which the pages are both linked to the same following page, or can be complex multi-trees with multiple sequences all rejoining again at one point. Even so, one of the choices in a split may contain a more extensive sequence then another, something Bernstein refers to as a tour or overview. A literary dimension is added to this navigational pattern when the player's choice influences the course of events in an interactive narrative. In a 'Rashomon pattern' the elements in a cycle contain a split/join. That way the player can make a choice while in a cycle, yet always returning to an element in the cycle and thus never really breaking it. [Wouter Hager, 2001].

Neighbourhood

A group of links that are situated closely together or similar in the way they look or act can signal a reader that these links are somehow related to each other. Probably the best known example of a 'neighbourhood' is the navigation bar that can be found on almost any web site. In a navigation bar the main topics of a web site appear as grouped links or buttons presented in a uniform style.

Missinglink

Bernstein describes a 'missing link' as a link that the hypertext may suggest, but that does not actually exist. A link can be suggested by literary means, for example by an implicit reference or a missing obvious next step in a course of events. A missing link can also occur as a structural

irregularity [Wouter Hager, 2001]

Feint

Sometimes the player is presented a future link or topic. A future navigational possibility is given, but cannot be pursued immediately. This way the writer can create certain expectations, reveal the full scope of a hypertext or confront the player with the way the hypertext is organized or thought out. Of course these aspects can all be used falsely, for example the true scope of a hypertext can in this way be concealed and expectations can remain unfulfilled or deceive. When several things to come are conveyed, but actually can never be found in a hypertext, a link might be missing on purpose. Using (or abusing) the players' expectations in this manner would most likely be attractive to writers of hypertext fictions[Wouter Hager, 2001].

2.7 Patterns in practice

As mentioned earlier these structures can be used in computer games as well as ordinary hypertext. The knowledge we have obtained in the hyperfiction research has inspired us a lot, in the idea development of our own game “Sleep Walking”. By combining these different patterns, we have developed our narrative in our game. This will be described later in the report.

The patterns and structures of hypertext narrative sometimes seem complex, and a few critics dismiss hypertext because it does not always fit into familiar dramatic structures. But hypertext's patterns are not confined to avant-garde experiments; the patterns that help us understand hypertext fiction are patterns we see in other large-scale narratives -- journalism, history, memoir, and technical writing[Bernstein, 1998].

3. Analysis of a game

As mentioned in the introduction we want to make our contribution to look at games in another perspective. We choose the theories of hypertext (-fiction) in the view of Mark Bernstein with his angle of the nine patterns of hypertext as described and discussed in the previous section.

3.1 The game

The game we will be analyzing is called *SleepWalk*. It can be described as a game which can be played in many ways. Central in our concept is that the player is situated in a kind of dream world where anything can happen. The main 'plots' are centred on four basic emotions: Fear, Anger, Grief and Joy. To read more in-depth about the game's conceptual structure we refer to the project report *SleepWalk – A game with an Attitude* which will be handed in 28th of May 2004; where after it will be available at: http://www.medialogi.net/

The game is a first-person-walk-through critical game with similarities towards most first-person shooting games; except for the shooting of monsters and enemies are non existent, and the purpose of the game is different. When we write critical game it is referring to an article written by Shuen-shing Lee ”I loose, There for I think” where Lee states that:

> *They [socially or politically critical games] appropriate and twist the established gaming models and schemas of popular games. These re-calibrations challenge the supposition that games equal fun* [Lee, december 2003].

The game *SleepWalk* has to main goals:

1. *To make the player aware of the possibilities of the game media;* and
2. *To remove the player from the traditional game concepts and to open the door to other games such as art / critical games.*

SleepWalk is based on the 3D engine created by David Brackeen [Brackeen, 2003]. We have extended and refined his source codes so it fits our project. The game is programmed in Java SDK version 1.4.2.03and Java 3D 1.3.1. It is not the intention of this report to uncover the depths of the java coding; instead we will focus on the user interface, how the game is related to the before

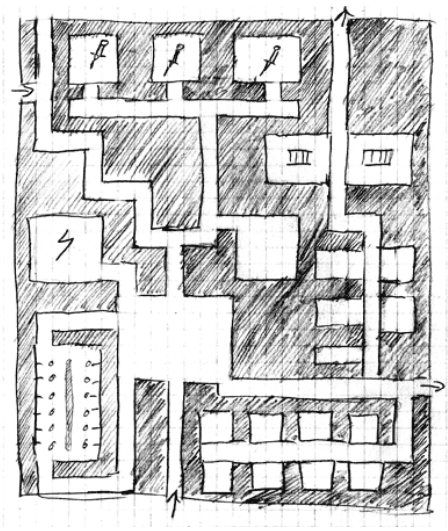
mentioned patterns and textuality in hypertext. These relations will be brought in comparison to hyperfiction as an alternative way of structuring a game.

3.2 The games interface & story line

The game *SleepWalk* is set to run full screen in the resolution 640x480 in 256 colours. Because of the low resolution of the graphics the main emphasize has not been on the looks of the game, but on the conceptual development instead. For further details on this matter we refer to the project report mentioned in the paragraph *"The game"* of this paper.

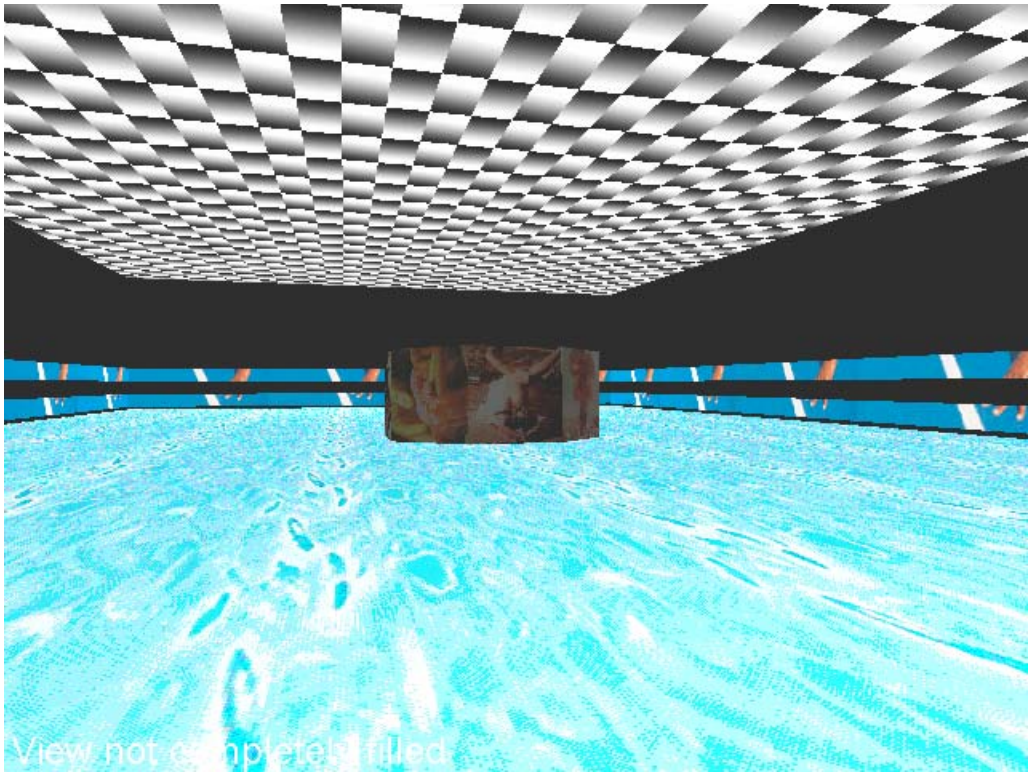
But still the game's quality will shine through, the – at times - rather crude graphical representation of objects and environments the player encounter in the game.

The user interface is quite simple: As previously mentioned the game is experienced as first person. Therefore the navigation is rather simple. The player moves forward and backwards with the up and down arrow keys and strafe left and right with the left and right arrow keys. Turning the view is done with the mouse so as the player can look up and down by moving the mouse forward and backward, and to look left and right the player should move the mouse to the left and right. The player can also do certain things with hot keys, such as flying by pressing 'f', crawling by pressing the key 'c', jumping by pressing 'j', look closer (zoom in) by pressing '+' and zoom out by pressing '-' . These hot keys are not available at all times because of the restrictions/possibilities in the different kind of emotion scenario's e.g. in a fear scenario the player cannot move fast around. The fear scenario is a labyrinth that you will have to explore in a more traditional way which means there is no flying and zooming.



In the 'centre' of the game we find the 'Portal' which is the navigational space, where the player will be 'able' to go to the areas where he/she will experience the four different emotion scenarios. This will be controlled by the encompassing artificial intelligence (AI). The AI will be represented by objects – such as columns, colours, sound, trees, staircases etc. - that will change the environment dynamically depending of how the player reacts upon the objects in his/hers close surroundings. Further more the Portal will look differently each time the game is started. Below you see a screenshot of the

Portal (work in progress).



Everywhere in the Portal the player will encounter invisible 'hotspots' or as we see them zones, in which the player will encounter (invisible) 'doors' out of the Portal to the different emotion scenarios. The Portal is made up by these zones; technically these are rooms within rooms.

The above mentioned hotspots are closely related to the associative elements in *SleepWalk*.

3.3 Associations in SleepWalk

When discussing association in *SleepWalk* it will have to take place mostly on a theoretical basis since the level of detail in the different scenarios needed to illustrate the different objects has not been developed yet.

3.3.1 Association in text

The Portal - as we see it so far - contains information set as images on a billboard. When we keep in mind the dream aspect of the game and the four emotion scenarios, there is a direct association between the images on the billboard and the four scenarios.

As an example we will describe the association between two images from the billboard and the different emotion scenarios.

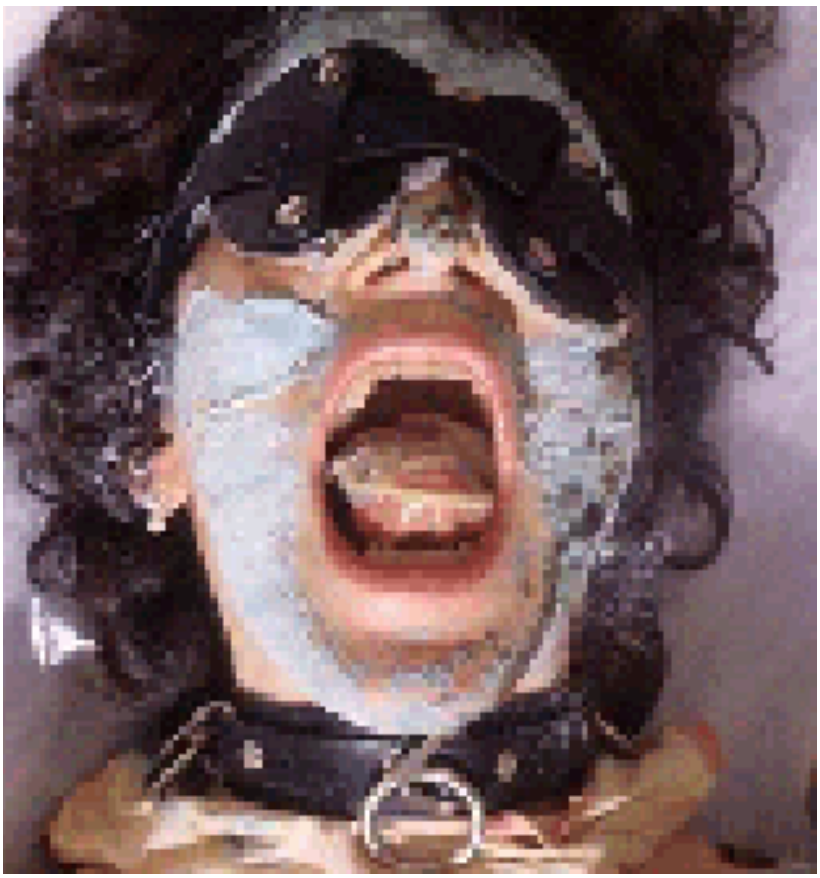


Figure Billboard image

The image above is one of eight images the player will meet when he/she manoeuvre in the portal and if you keep the different emotions in mind you will here find a strong association towards fear. The fear scenario will take place in what resembles a mental asylum or hospital where you try to find your way out of corridors and will see and hear objects that can be similar to this image or be associated with this image.

Figure 1 Billboard image

As mentioned in the game section of this paper we want to create a critical game with a different content which will explain this rather disturbing image of a dying little boy. In terms of associations towards the emotions of the game it is up to the subjectivity of the individual player to determine that but anger and grief definitely comes to mind.

The anger scenario of the game is thought of as highly disturbing for the player where obnoxious sound will accompany some very disturbing video sequences; like a bombardment of unpleasantness. Therefore the player will find an association with text element like this in the game and the game as a hole.

3.3.2 Associative linking

Usually the linking in both hypertext as well as in hyperfiction are intentional and designed both with regard to a high level of textual quality (the anchor) and for the purpose of gaining additional information (associative node). The association between the link and the node has to occur in all three stages namely the anchor, the link (typed link) and the destination node (relevant information). Due to the nature of our game and our lack of conformity to the regular game standards our linking might not be perceived as associated linking per say. We can say that the thought process of associated linking has taking place in order to avoid the actually action of the linking of nodes in the game to be too obvious.

From this point we will be looking at textual qualities in *SleepWalk* in the sense of the seven

standards: *Coherence, Cohesion, Intentionality, Acceptability, Informative, Situationality and Intertextuality*.

3.4 Textuality in SleepWalk

When we look for textual qualities in SleepWalk we will be looking for the semantics of the game: What meaning do we find in the different elements of the game?

The basis of the seven textuality standards has been described and discussed in *(Chapter 2.3)*; and therefore we will go directly to the dissection of the textuality in the game *SleepWalk*.

In the matter of *coherence* we find that the relations between the objects in the local (the Portal) and the environment in the global (the different emotion scenarios outside the Portal) are representing an (broad) understanding towards the main theme of the game, namely dream symbols. When the player enters a hotspot with some visualization of the emotion in the game, there are coherence between the locally shown objects and the objects in the global – or the emotions 'away' from the Portal - 'text'. There are found a *Global coherence* when the player is confronted with the 'billboard' in the Portal: We know that this is a depiction of a board where we can get information.

Cohesion is represented – amongst other elements – by the hot keys that are available throughout the game in some of the different stages, as mentioned earlier in this chapter, the player has the possibility to add some extra 'movements'. These objects have immediate relations to the game's theme as they represent a part of the dream universe. We can say that the cohesion that is taken place is similar to that of hypertext where cohesion appears in the matter of paratext. As described earlier in this report (*in chapter 2.3)* the paratext is made up by two elements *the peritext* and *the epitext.* Peritext in *SleepWalk* can be seen as the coloured lights as well as the objects in the different zones. These coloured lights and objects can be seen as nodes linking to other elements in the game. Elements of epitext can be found in the billboard with its different kinds of 'posters' located in the Portal; this can be seen as a commentary towards the frightening/scary, bizarre world we as a player live in.

In the sense of thematic progression in the game we can be say that the main progression is *Derived Hyperthematic* because the themes in the game are derived from a ”hypertheme”; namely the four basic emotions that are carrying the game and which all are represented in the Portal.

The *intentionality* can be seen in the main goal of *SleepWalk*: To make the player aware of the 'fact' that a game not necessarily has to be 'straight forward' with an end-result. Otherwise the intentionality could also be seen in – if such were produced – the help documentation for the game.

As for *acceptability* we can apply Grice's conversational maxim and find that there are purposely inconsistencies among our text and the recipient. As a mean of maintaining the challenge in the game the player might not always get what he/she finds as relevant information or avoid ambiguity. E.g. the player gets the information that is needed for playing the game in the beginning of the game where it is stated how you manoeuvre but you do not get any information at all about what you are expected to do in the game.

As for *informativity* it is important that the player do not feel it is either too easy or too difficult to play the game and therefore we have had to establish an acceptable level of predictability between the different scenarios and the different objects through out the game so as the player still finds something new and unexpected in the text.

In the case of *situationality* we find that the player most likely will express or have some curiosity towards the game's different look & feel and that the different theme & goal will challenge the player.

The last standard *intertextuality* is low represented in *SleepWalk* because the game can be played without "reading" other texts and even though there is a lot of text elements in the game you can see the game as one text.

After this short analysis of the seven standards of textuality which we found examples of in the game, we will be moving on to the extraction of the game patterns in relation to Bernstein's nine patterns in hypertexts: *Cycle, Counterpoint, Mirrorworld, Tangle, Sieve, Montage, Split/Join, Missing Link* and *Feint* (please refer to chapter 3.5 for a description of these patterns).

3.5 Patterns in Hypertext

When making a dissection of a hypertext – in this case a game and as we se it a game with hyperfiction qualities – we could choose another angle and look at patterns in the view of Bernstein. The nine patterns have been uncovered for the purpose of categorizing the qualities of a hypertext. Therefore not all of the patterns might be found in the game *SleepWalk.* Those patterns not found will not be described in this analysis.

The first of the patterns, *Cycle* can be seen in the way the player always returns to the Portal after 'finishing' the visit or exploration of one of the four emotions. To be more precise we can also say that the way many cycles are 'overlapping' the player can move 'freely' between them and by that movement we have produced a *counter.*

In the sense of *Mirrorworld* we can point out that it exists, because of the different scenarios in the four emotions are giving the player different angles of each emotion; therefore mirrorworlds can in fact be found as such.

In *SleepWalk* the player is confronted with a lot of *Tangles*. This is because we have tried to make the game more mysterious to play: As Bernstein points out tangles can be

> *"used purely for their value as intellectual amusement, but also appear in more serious roles. In particular, tangles can help intentionally disorient readers in order to make them more receptive to a new argument or an unexpected conclusion."* [Bernstein ,2003]

And that is exactly what we intended: To make the player more receptive to the game play.

Montage can be found where the lighting and objects are overlapping each other. This gives the player the sense of multiple choices he/she has to relate to: Should I go to left or to the right in this light beam in order to get to the place that I want?

The *Feint* in the game is to be seen in the navigational space in the Portal: The player is presented with a lot of opportunities – though it is not obvious what to make of the opportunities that he/she can pursue or what they lead to. The result of the action taken might not have any instant impact but can instead accumulate and surprise at a later state in the game.

3.6 Sleep Walking *as a Hyperfiction Game*

When we look at the game as an extension of hyperfiction we will be looking at the linearity of the game. And when speaking of linearity there are three kinds of linearity types. In our case – the game *SleepWalk* – we are covering the linearity known as *poly-linearity* – which is known as *Rhizomes.*

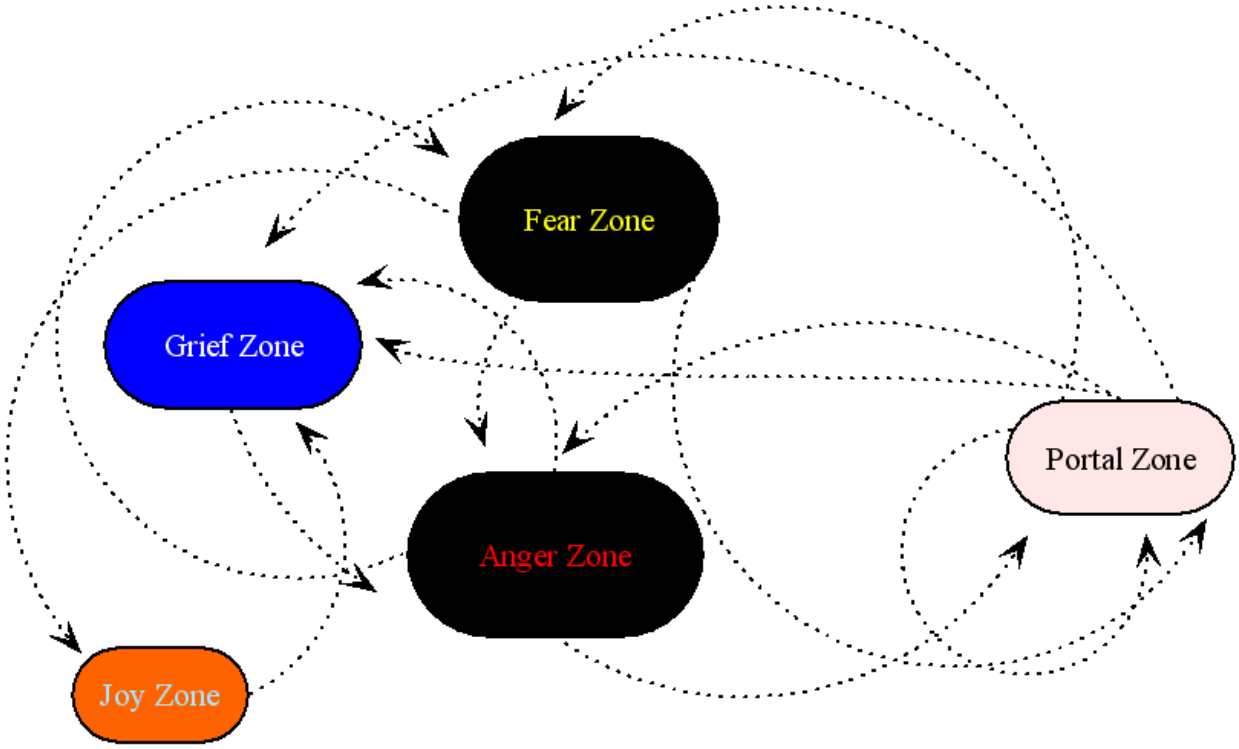
The paradigm of Rhizomes – in the context of hypertext etc. - stems from Deleuze & Guattari's book *A Thousand Plateaus: Capitalism & Schizophrenia* [Deleuze et al., 1987]. The term origins from the botanical world and according to James K. Brown can be defined as:

> *A creeping plant stem (not a root) growing beneath the surface, consisting of a series of nodes with roots commonly produced from the nodes and producing buds in the leaf axils* [Brown, 2000].

Further on rhizomes can also, according to Cornelius Holtorf (Holtorf), be connected with archaeological theory in the sense of the past and present are *"...firmly interconnected and inseparable"* [Holtorf]. What these two elements have to do with rhizomes I will uncover later on in this chapter.

In the words of Deleuze & Guattari [Deleuze, 1987] rhizomes are made up of plateaus where in this sense a plateau is *"any multiplicity connected to other multiplicities by superficial underground stems in such a way as to for or extend a rhizome..."*[Deleuze, 1987].

Below you see an illustration of the structure of the game seen which is done in a Rhizomic way.



The graphic illustration above – *illustration 2: Structure of the game* - is showing how the player "can" jump from zone to zone. When we put the word *can* in" " it is because of the fact that the players do not have the possibility to decide for them self's where to go when moving in or out of a zone. In this matter the game goes out of the boundaries in the hyperfiction structure: The player will not have full control over the movement between the different emotion scenarios in the game; instead there is full manoeuvrability locally inside the individual scenarios.

As we state in the section *Hyperfiction in computer games* the player must be active, make choices and use his imagination in interactive fiction, which we dare to define *SleepWalk* as to be. In the case of *SleepWalk* the player are not faced with a problem to solve; the opposite is actually taken place in the game: the absence of problems might suggest that the problems (in the dreams) are presence.

The motivation for the player to play the game (again and again) will instead be the players wish to explore dreams and their symbolic meaning. These symbols are being presented as nodes in the form of lights, objects, streamed videos and images. The interactive part of the game takes place with in the nodes in which the player has the opportunity to decide where to go. These decisions are not visible to the player since they are contained in agents (artificial intelligence) which are

collecting points and keeping a score card. This score card is the way for the agents to ”decide” if the player should experience a certain emotion scenario.

With the above mentioned features of the game *SleepWalk* we claim that the structure resemble the structure found in hyperfiction.

With the game *SleepWalk* in mind we will try to make a connection to how games could develop in the future.

4. Future of hyperfiction games

As written, in the paragraph *Hyperfiction in computer games,* one reason to why games with hyperfiction qualities have not been broadly accepted by the public might be that playing a hyperfiction game can feel like a much more demanding challenge in contrast to the more straight forward shoot them up games where the action surpass the story. Due to the narrative differences the player has to use more of hers/his intellectual strength when playing a game in the category of hyperfiction games.

Many of the examples we have encountered in the cause of the research for this paper has been games there has hyperfiction qualities but spawn a very artistic feel to them. Examples of different hyperfiction works can be found in the *links to hyperfiction productions* which we provide at the end of this report. Especially we would like to direct attention to the work of Millie Niss and T. Dunn as artistic works.

To overcome the obstacle of being too artistic and out of this world, we suggest that developers of hyperfiction games should employ a more visible storyline in a more user oriented way. By this we mean that a hyperfiction game should take the player's situation both in and out of the game in to account and reason upon these 'facts'. A combination of the high level graphics known in "shoot them up" games, more intriguing stories and a more cinematic approach through out the game could be a solution.

Also we would like to make it clear that a hyperfiction game is more than just a game. To us the reason for using the qualities of hyperfiction should be more than just create a different game; it should be used for creating a game with an attitude towards a social, humanistic, health, political or some completely different problem related to the real world.

To show where we feel these qualities realized we will bring forward an example which successfully are using some of these "guidelines", namely the game called *Tropical America.* This was produced by OnRamp Arts in 2002 as collaboration between artist, students, writers, teachers, high school students and the OnRamp Arts. According to OnRamp Arts' web site the game:

> *"Features a bilingual, thematic gameplay, accompanied by an online database of educational resource materials, source texts and imagery."* [OnRamp Arts et al., 2002]

This tells us that the angle of the game has been hypertextual in the way that the *nodes* are produced by the online database. This database will most likely contain a vast amount of *documents* in the form of text, images, sounds and other hypertext sources.

Before starting the game you have to register with e-mail and a username. This feature give the player a feeling of "*being"* in the game.

The game's storyline short is that you are the only survivor of a massacre in your village and your mission is to *"find four pieces of evidence to bring justice to the memory of your small village."* [OnRamp Arts et al., 2002].

Another point that have "led" us into the belief that the game is an extension of hyperfiction is that it has a *"Narrative, strategy-based game design based on thematic, cross-cultural histories"* and has an "*Integration of featured and related historic subjects within the game to a parallel HTML research site, including actual texts, images, and online resources.",* which on top of the game design features are incorporating *"both exploration and archive of the interconnections between historical events, creating a model of a new media 'textbook'. "* [OnRamp Arts et al., 2002, /features.html]. All in all we find this on-line game a part of the future within hyperfiction games, even though it is from 2002.

Another future securing feature in a hyperfiction game we would like to bring forward is the possible multi player on line hyperfiction game. This idea is not at all new. It has been alive and kicking since the birth of MUDs (referring to *multi-user domain, multi-user dungeon, or multi-user dimension)1* where the connected people decide in what way they would interact with other connected people; this would bring another dimension to the hyperfiction game: The players could bring their own experience from the 'real' world in to play, have the opportunity to create their own virtual worlds and develop a new and constant changing synergy in the game.

[1]MUDs is a game with *"an environment where multiple people may be logged on and interacting with one another "* (The Mud Connector, 1994-2002). Many MUD's are based on books or films from outside the digital sphere. For example there exists MUDs which are inspired the cyperpunk author William gibson's books.

5. Conclusion

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