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Hypertext Game - Background Reading

The term “hypertext” refers to a type of interactive text that contains hyperlinks to other passages of text. “Hyperlinks” are certain interactable words or images that, when activated via click, may take the reader to another section of the same passage or to another web page entirely. Hypertext is often used in online articles that include information supported by evidence from some external source, or where said information may be better understood when supplemented with context, found elsewhere. The term “hypertext” itself was coined by Ted Nelson in 1963. Nelson defined hypertext as "a body of written or

pictorial material interconnected in a complex way that it could not be conveniently represented on

paper. It may contain summaries or maps of its contents and their interrelations; it may contain

annotations, additions and footnotes from scholars who have examined it." [1]

Pages and/or passages linked together through the use of hypertext form a “hypertext system.” As defined by P.M. Baird, “Hypertexts are computer-supported systems for non-sequential, non-linear reading and writing, offering authors and users novel means of information management, dissemination and retrieval.” [2] Hypertext systems, in their base form, are comprised of *nodes* and *links*. [1] Nodes consist of groups of passages of hypertext or other hypermedia, including images or videos- for example, a web page could be considered a type of node. Links are the connections between nodes- i.e., the actual hyperlinks that allow readers to jump between nodes by clicking on them.

As stated by Baird, these systems allow for an interactive form of learning that gives the readers control over what information they read next. Hypertext systems are often used to create databases or series of linked articles that are very accessible and informative.

A very well-known example of an advanced form of hypertext system is Wikipedia. The vast majority of articles on Wikipedia are formed of passages that contain hyperlinks to other articles on the site, allowing the reader to easily access this secondary information. Mousing over any such link will display a small dialogue box containing a snippet of the information found at the page the link points to. This allows the viewer to gain a small amount of context as to what sort of information will be found at that link. Clicking on any link will, naturally, take you to the page found at that URL.

Oftentimes, when creating systems such as these, writers use hypertext building tools. These tools provide an easily-understandable, visual interface through which one can create their own hypertext system without the hassle of manually implementing each node and link by hand, which can be tedious and is prone to error. This allows people who do not possess adequate programming knowledge to easily create them.

“Hypertext games”, specifically, are a form of interactive fiction told through the use of hypertext systems. On each page, the player is presented with a passage of text, and one or more choices to choose from. The choices are usually presented in the form of highlighted keywords or sentences explaining what actions the player may take in the given scenario. The player essentially “creates” their own narrative by clicking on the keywords or sentences, and the player’s choices link them to other passages that form an overall comprehensive story with elements that may change based on decisions they made. In other words, hypertext games are a form of nonlinear fiction that utilizes hypertext systems as its mode of presentation. Hypertext games can be compared to the choose-your-own-adventure genre of novel, as the two forms of literature function similarly. By clicking on a hyperlink, one makes a choice as to what action to take in the narrative, just as one does when reading such novels. This form of game can be entirely text-based, telling a story through words alone. Advanced forms of hypertext games may include images, sound effects, or music, among other features, to enhance the player’s experience.

These types of games appeal to people who have active, creative imaginations. The general lack of visual elements allows the player to envision the world and scenarios within the narrative themselves, using the passages provided by the writer to build scenes in their mind. They are commonly created by game developers who do not have a large budget at their disposal, as their basic structure and general absence of visual elements in turn makes for a lack of need for artists, sound engineers, animators, bug testers, and other personnel often needed to create a video game.

Therefore, hypertext games are an extremely accessible medium. Many open-source, online tools make creation of said games easy, and their often simple nature generally allows for streamlined, uncomplicated development by small teams. Hypertext games require no visual elements apart from the very text itself, and players with visual impairments can easily make use of text-to-speech programs to experience the story. They do not require any high-end graphics card or processors to display their texts. They are also quite easy to understand, as they do not require specific knowledge, like the ability to maneuver character or control an in-game camera, that an inexperienced, first-time gamer may not possess. All that is needed to progress the game is reading comprehension and the ability to click on a link.

Many hypertext games today are created by one or very few people who, like those who use hypertext building tools for creating databases, use special hypertext building tools that simplify and streamline the development of such games to a point at which no programming knowledge is needed. For this purpose, there are a multitude of free and commercially-available tools accessible through means such as the Internet. Among the more well-known ones are Twine, Quest, Hoot, ChoiceScript, and Inklewriter; Twine being one of the most well-known of all.

A study published in 1995[3]lists a number of features users of hypertext building tools find useful. Among those are a full range of editing tools that allow for easy manipulation of their created hypertext system, an automatically generated visual map of the system, a searchable database of hypertext nodes and links, and a means of testing the created systems and gathering feedback on the result. Many modern hypertext creation tools include most if not all of these features. The aforementioned Twine, for example, is one such tool.

Twine is an open-source interactive fiction creation tool originally created by Chris Klimas in 2009, which can be used to create hypertext games with branching stories, and the resulting file can be exported to other tools and used as a base for text systems for more involved and complicated computer games. It has a very user-friendly visual interface, with arrows connecting passages(represented by squares) that link to each other, and the passages can be clicked and dragged and arranged to suit the user’s preferences. Opening a passage displays a window with many clickable buttons to allow the user to easily add features such as images, hyperlinks, if-statements, stylized text, variables, scripts, and other functions to the passage. The user is also able to directly edit the text via the text box itself. The resulting stories/games are read/played through browser web pages, which can easily be accessed via any device with a web browser. The resulting database of hypertext passages can be exported to other games and programs freely. As Twine is open-source, the code that comprises the program can also be edited and exported to other projects, and is often used as the basis for text systems in the aforementioned games. Editing and adding on to the base code allows for the extension and implementation of extra features not included in the base program, such as custom page layouts, character creators, animations or embedded videos, main menus, and save files, among many others.

I intend to essentially base my project off of Twine. This tool has many useful features that I plan to include within my own project. For example, its drag-and-drop interface makes for a very user-friendly experience. I also plan to include a means to export the project to allow the text system to be used in other games, but I’m not entirely sure how I’d go about something like that.

I also intend to take cues from 11BelowStudio(Rachel Lowe)’s HECC-IT, a tool developed by a former University of Essex student for this very project. The process of planning and creating HECC-IT is documented quite well in the creator’s GitHub repository, and I plan to read through elements within the repository so I can envision exactly what this project will entail. I am especially interested in the use of Showdown, which is a JavaScript library used to convert markdown text to HTML, and vice-versa. As I plan to run the resulting games in a web browser, the ability to automatically create HTML pages based on inputs in a markdown editor is invaluable.

**References**

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