Scriptwriting for Games: Part 1

Foundations of Interactive Storytelling

Stories have most likely been part of the human experience from the earliest days of language, but until recently the storytelling medium has been largely static. Barring different versions of the same story, any given tale unfolds the same way every time one reads it. Computer games promise the potential to move beyond this strictly linear form by offering stories that interact with the player, allowing them to participate in the decisions or actions that shape the narrative. However, at the current time this field is still in its infancy.

The origin of interactive storytelling probably dates back to Tactical Studies Rules *Dungeons & Dragons* (1974), itself based upon a set of tabletop battle rules - Guidon Games' *Chainmail* (1971). Similar in terms of mechanics, *Dungeons & Dragons* had a revolution in its focus, changing the game play to being about characters, not armies. This was the start of tabletop role playing games (RPGs), which were to influence and inspire many computer games to follow.

The tabletop RPG is a 'perfect' interactive storytelling medium, as an unrestricted story develops from the dynamics of the group of players, led by a Games Master (GM). The former decide upon the actions of key characters in the story, the latter takes the role of the rest of the universe - becoming very much the surrogate author of the collaborative tale that develops.

In many ways, the quest for interactive storytelling in games is a quest towards the perfect state that tabletop RPGs already had. The computer game takes the role of the Games Master, and the players remain in control of the lead character's (or characters') actions. The problem is that a human GM can respond to any conceived action on the part of the player, but until Artificial Intelligence advances an astonishing degree, computer games are inherently limited in their flexibility.

What computer games lose in terms of the freedom offered in tabletop RPGs, they make up for in immersion. Any tabletop RPG game is still essentially a group of people developing a dynamic story through words alone - a computer game provides the visual and aural experience that brings it closer to cinema than radio theatre (which is the medium that tabletop RPGs arguably resemble most strongly). This difference in the size of the audience for film compared to radio plays is reflected in the difference in audience for tabletop RPGs versus computer games.

This essay looks at the foundations of interactive storytelling, with a focus on their relevance to computer games. Tabletop RPGs (and the related medium of adventure gamebooks) are an important part of the background and history of this new medium, but will forever by a minority pursuit. Computer games, on the other hand, look set to take

the reigns of interactive storytelling and bring them to a broad, diverse and expectant audience.

Interactive Stories

Any game featuring both characters and a story in which one or more narrative aspects changes interactively can be considered an interactive story. The possible narrative aspects that could be made interactive include:

Plot

The most obvious route to interactive storytelling is by creating a plot that varies in response to the player's actions. Perfect Entertainment's *Discworld Noir* and (to a much lesser extent) Konami's *Metal Gear Solid* are examples of this.

Character attitudes & personality

A more satisfying way to approach interactive stories is to look at ways that the player's actions might affect the attitudes of characters in the game world. We will look at several ways of approaching this later in this essay.

Theme

Although strictly hypothetical at this time, it is possible to conceive of a game in which the theme varies interactively. For example, we can imagine a game in which the story elements are mediated by the game's story engine in relation to that which the player has paid the most attention. If the player spent considerable time talking to a romantic interest, the theme of the story becomes biased towards a romantic element; if they focussed on violent activity, the thematic details might evolve around an exploration of violence.

Mastering dynamic plots and character attitudes will almost certainly be a prerequisite to exploring interactive themes.

Note that our definition requires more than both interactivity and narrative elements to be both present: many computer games (which are inherently interactive) have story elements, but that does not make them interactive stories. Only if the form of the story itself is interactive can we seriously make a claim to it being an interactive story.

The Value of Interactive Storytelling

Now we have defined what can be considered an interactive story, we are in a position to discuss why interactive storytelling might be of value - both artistically and commercially. Just because a thing can be done does not make it worth pursuing, and with the medium in its current, nascent form it is necessary to make a case for its importance.

From an artistic perspective, interactive storytelling represents a new, highly expressive art form. Before the 20th century, all art was essentially reactive. A work of art was created, and it created an emotional (or intellectual) experience in its audience. Interactive art creates a dialogue between the art and the audience, creating a more immersive artistic experience.

This issue of immersion is linked to the commercial appeal of interactive storytelling. Many games satisfy the player's need for a sense of involvement in the story by creating the illusion of an interactive story. Either the game forces the player to jump through certain story-based hoops in order to progress, e.g. Sega's *Shenmue* series, or the game features a gameplay element wholly separate from the narrative, as is seen in Square's *Final Fantasy* series in which the player is engaged in largely pointless combat between story elements. In both cases, however, the players actions have essentially no effect on the progression of the story. When executed subtly, this illusion can be quite effective; often, however, players are left asking "why can't I do that?" or worse "why do I *have to* do that?"

Providing a true interactive storytelling experience has the potential to satisfy the audience by connecting their actions to the unfolding story directly. This may be as simple as reflecting the player's actions in dialogue, or as complex as dynamically varying the sequence of events to work around the player's choices. Either way, this non-linearity appeals to the hardcore gamers (including the majority of magazine reviewers) offering a direct commercial advantage. It also implies a greater replay value, as hardcore players replay the game to see the other ways the story could have transpired.

Of even greater commercial value is the potential to unlock a vast reservoir of casual gamers already circling at the fringes of the games medium. The casual gamer lacks the patience (or stubbornness) to persevere with a game that annoys them, but once hooked in become intensely loyal to those games that have grabbed them. As with television and film, there are few better ways to captivate than with interesting characters and plots. However, the viewer expects no control of the outcome in the former media - in games, control of the flow of events is expected, but is usually illusory. Games with relatively easy-to-play game space, but an interesting dynamic story space have the potential to dramatically expand the size of the computer game audience.

Interactive Plots & Non-linearity

The term 'interactive plot' can be taken to be broadly synonymous with the terms 'non-linear story' or 'non-linear plot'. The term 'non-linear' is self-explanatory, but in this context should be taken to mean that the story elements (dialogue with other characters, cut scenes et al) do not occur in a fixed sequence. There is a wide range of extents to which this non-linearity can manifest in a game story. Note also that a game can be non-linear and yet still have a fixed outcome - the issue is the journey through the plot, not its conclusion.

The structure of a game's story determines wholly the extent of its non-linearity, and there are various degrees of interactivity of plot that can be expressed.

Linear

The most basic structure imaginable is linear: the game's story elements unfold in a strictly linear sequence. Sometimes the game play will be non-linear, but the game

elements can unfold in a non-linear way. This is true of many games at the moment: the story proceeds as a series of linear checkpoints that the player reaches in sequence, although they may have freedom to explore the game world in a broadly non-linear fashion.

We can visualise the linear structure as a straight line:

The advantages of the linear structure are that it is a reliable and resource-cheap way of approaching the story.

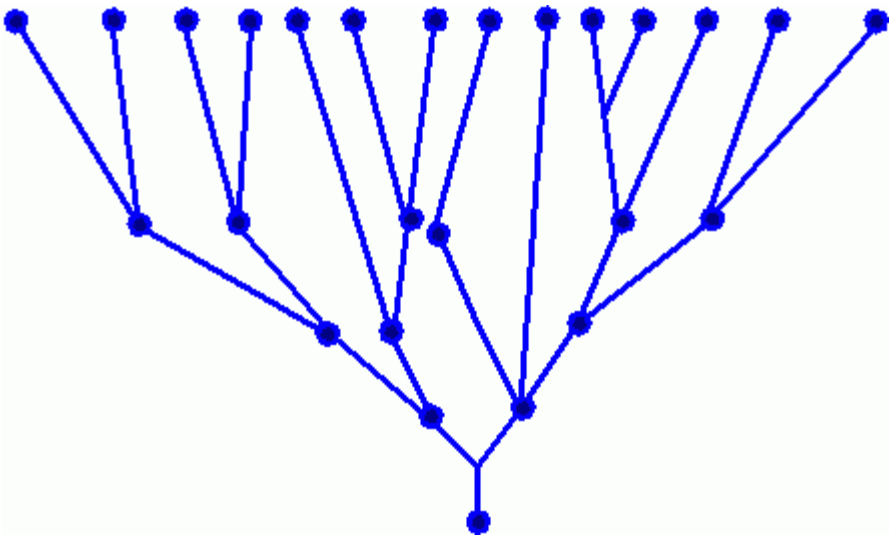
In games with a low budget, the linear structure is often the only affordable approach.

The disadvantages are obvious: it is unimaginative, and the player has no control over the development of the plot. If the game successfully manipulates the player into caring about the same issues as the characters, the disadvantages are minimised - but if the player ever feels trapped in someone else's story, the linear structure is usually to blame.

Branching

The branching structure is rarely used, and for good reason. The branching structure leads to a number of fatal problems, and indeed is in part responsible for the miscomprehension that non-linear stories are intractable or inappropriate for use in games. It is unfortunate that many people in the games industry believe that the branching structure is the only non-linear option available, and this may be in part the reason for the persistence of the linear structure.

We can visualise the branching structure as a tree:



The plot begins at the base node, and certain points in the story are defined as branch points, where the plot splits into separate paths. With no recombination of threads, the branching structure leads to a number of end points equal to the number of branch points plus one (for two-way branching) or even more (for multi-path branching).

The fact that the number of end points is so huge is what is known as the combinatorial explosion. Branch in two ways four times and you have to deal with sixteen different paths ($2^4 = 16$) - and each binary branch point that you add to all paths doubles the total number of outcomes. No game could survive such a vast investment in potentially unused resources, and as a result the branching structure (when it does appear) is usually pitifully simple (often just a single branch point).