Journey of Discovery

The Night Journey Project as Game/Art Research

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1) Introduction

The Night Journey project is a game project conceived by Bill Viola, an internationally acclaimed artist and MacArthur fellow, which uses video game technologies to explore the universal story of an individual mystic's journey towards enlightenment. The game is being developed in collaboration with a team from the USC Game Innovation lab, including Kira Perov, Tracy Fullerton, Scott Fisher, Andreas Kratky, Todd Furmanski, and Kurosh Valanejad.

The project team has spent the past year exploring narrative, visual and procedural themes related to the topic of enlightenment and the possibilities for the project allowed by the game medium with the objective of creating a work that stretches the boundaries of what games may be possible of communicating with its unique content and mechanics.

Narrative inspiration for this project includes the lives and writings of great historical figures including: Rumi, the 13th century Islamic poet and mystic; Ryokan, the 18th century Zen Buddhist poet, Shankara; the 8th century Hindu mystic and commentator on the Upanishads; and St. Anthony, the 3rd century Christian desert father.

Visual inspiration has been drawn from the prior works of Bill Viola, which afford reference for 3D objects, scenes and presences in the world; provide textures for the landscape and objects; and permeate the world itself, creating a bridge between the "real" and the "imagined," memory and experience.

Procedural inspiration is based in a set of deign goals that have arisen from a central question asked early in the design process: what is the "game mechanic" of enlightenment? How can we abstract and systemize such an intensely personal, yet archetypal experience?

The development of this game is still in progress; and the overall success of its design remains to be seen. However, as progress has been made, it has become clear that the juncture of the game design process and the artistic process provides an interesting area of research in and of itself, regardless of the final product. This paper will touch on aspects of the Night Journey design process to point out possible intersections of games and art in terms of intent, execution, and experience.

2) Setting Design Goals

The design goals for the Night Journey project were developed in a series of creative meetings in which the team discussed both Bill Viola's inspiration for the piece in the illuminated manuscripts of historical figures as well as the potentially innovative nature of the gameplay as it might relate to the journey of enlightenment. Several high-level goals emerged from these meetings which have informed the design process. These were:

1) The desire to evoke in some way an archetypal journey of enlightenment through the "mechanics" of the experience – i.e. what the player is doing in the game.
2) The importance of interleaving the historical texts, illustrations, and acts of courage and faith they depict into the more visceral experience of a game world.
3) The possibility of extending the boundaries of the game experience beyond the virtual world so that it is not just a beautiful digital experience, but something that is carried by the user back into their "real" lives.

Various concepts, described in more detail below, were suggested in an attempt to merge these themes with the pre-existing design document[1] and to bring them together in a system that would be both achievable in the amount of time set for the project, as well as unquestionably innovative in terms of content and overall player experience.

This process of setting high-level player experience goals as part of an innovative game development process is part of a play-centric design process, which I have described elsewhere.[2] In general, the key difference in the play-centric approach and a traditional game design process is in the *type* of design goals which are set and the *methodology* for reaching those goals during the production. "Play-centric design is design and technology at the service of the player experience."[3] Throughout the design and development process, prototyping and playtesting are used to confirm the success, or make changes to, the system as designed, measuring actual player experience against the high-level goals.

"Mechanic of Enlightenment"

One of the key concepts of the game as discussed in the initial meetings is the procedural mechanics and the message communicated to the player through their interaction with these mechanics.

Many games use a goal/reward system for motivating player interaction. Typical examples of core game mechanics include attack & defense, construction & destruction, racing & chasing, etc. The goals of the Night Journey preclude using these existing models as the basis for a core mechanic, in that they do not require any real change of perspective or way of looking on the part of the player, an integral part of the journey we wished to model.

The original design document gave us a place to begin, in that it described visual puzzles as a way of making sure the player "changed perspective" before moving forward. In our early discussions, we decided against implementing these puzzles directly, instead hoping to create a more difficult, emergent game environment filled not with literal, solvable

[1] A design document was prepared by Kevin Teixeira of Intel and Bill Viola over the course of several years prior to this design phase. This document provided a starting point for discussions, and a touchstone for a number of important interaction points.
[2] Fullerton, T., Chen, J., Santiago, K. et al. "That Cloud Game: Dreaming (and Doing) Innovative Game Design" Sandbox SIGGRAPH proceedings, 2006.
[3] Ibid, pg. 2

puzzles, but rather with complex moments of visual and procedural reflection, memory, transformation, and change that the player must find and experience in order to continue.

An example of such a moment includes the re-creation of a dilapidated shack in the forest area of the landscape. This shack, which could be the retreat of Zen Buddhist poet Ryokan, is just as easily seen as an old hunting cabin, or a forgotten storage hut, is hidden within a grove of trees. The light from the shack shines through the trees as the player approaches, though there is no "readily explicable light source" as per Bill Viola's written description of the scene.

Approaching the shack thins out the trees and reveals more of it until you arrive at the clearing and the shack itself. This shack is a 3D model of one seen in a hand-held shot from an earlier piece by Bill Viola. In the Night Journey, however, it becomes not only a location and a visual reference, but also a memory space and a portal through time. As we move closer, the game takes partial control of our viewpoint – allowing us forward/backward movement, but guiding our left/right/up/down glance so that the experience is one of "entrainment," becoming absorbed in the moment. (This give and take between control and "guidance" is an ongoing theme, and is part of the procedural mechanic of the game.)

If the player chooses to continue approaching, their view slips freely between several moments of the shack in time: fully restored, partially destroyed, fully destroyed, and elements returned to the earth. These moments also transition between the "reality" of video footage and the "virtuality" of the 3D landscape, itself modeled after and textured with the same video footage, creating layers of potential interpretation and understanding as to the moment, the memory, and the medium itself.

This is one example of the many procedural mechanics being explored throughout the work, an attempt to create new "grammatical" concepts that go beyond direct conflict like attack & defense, or direct actions like construction & destruction, towards mechanics that require creative interpretation on the part of the player. In addition to the notion of "looking deeply" or "entrainment" that is explored in the hut, other mechanics include:

- Slowing the player down
- Encouraging the player to look deeply
- Creating a layered memory space
- Developing a recombinant narrative
- Illuminating historical texts
- Exploring a generative geography

Visual References

Early explorations for the visual style included examples from different periods of artistic practice, each of which showed an interesting interplay between mental and real spaces that intrigued us in relation to the idea of the spiritual and physical journey of the player. Experimentations with light and shadow, abstraction and illusion led the team to believe a black and white environment like those pictured above might best suit the game.

While we have remained committed to the choice of black and white, as the project has developed, we tended to move away from external references toward the reflexive use of imagery and captures from Bill Viola's prior works as both visual reference and actual material for texturing and building of the 3D world.

The images below show two different assets built from prior video pieces. In the first image, a pan of trees becomes the "grove" surrounding the shack experience described above. The second image shows clouds separated and reconstructed from a desert scene to create the sky box (actually a dome) for the Night Journey. The final shot shows the sky box art integrated into the landscape.

Figure 1: Landscape assets created from video captures of Bill Viola's work.

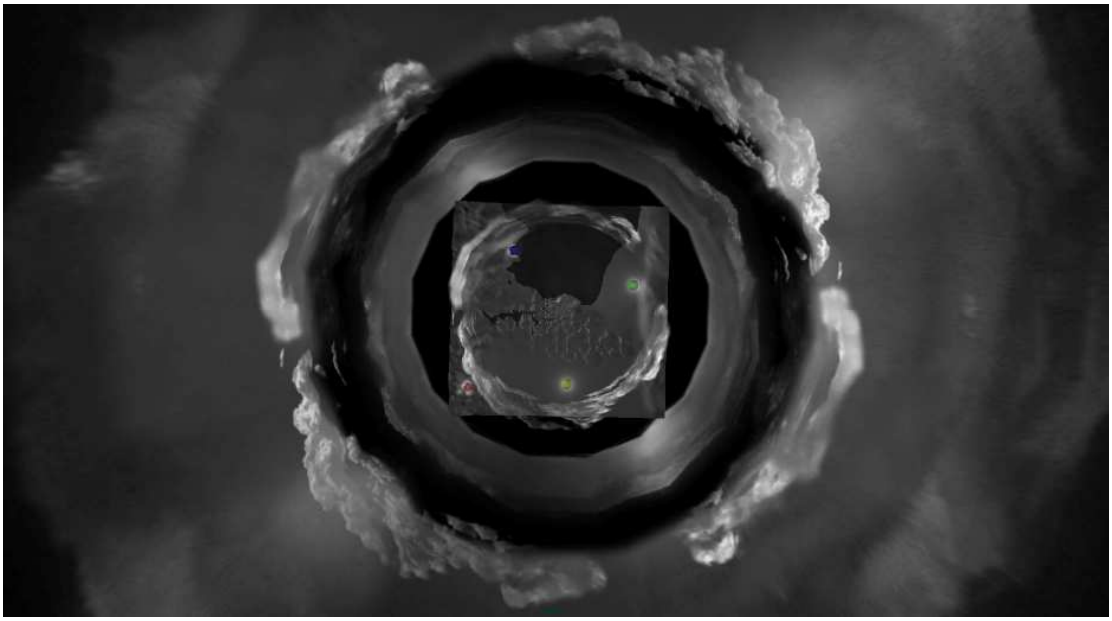

Figure 2: Landscape with Skybox assets incorporated.

Generative geography

Most first person 3D games use a geographically consistent terrain which the player has to navigate as part of their progression to the next levels. For The Night Journey, we imagined the geography as fluid element, changing with the player's actions, with time, movement, perspective and overall presenting a different experience each time the player accesses the game. As Heraclitus says that one can never step into the same river twice; in the Night Journey, we felt that the journey would be different for every player and the exploration of the game space should be a self-reflective experience that challenged the player's perceptions.

While experienced as emergent and dynamic, there actually is a simple underlying layout for The Night Journey, a "6 point" landscape sketched out by Bill Viola early in the design process. This landscape has four areas arranged around a central point: forest, mountains, desert and sea. It also has a vertical pole reaching to the heavens and falling through the landscape. As the player begins the journey, they fall down this vertical pole to the "landing spot." This fall takes place at twilight, and throughout the fall, they have control of their gaze, but not their imminent downward motion. At the height of the fall, the player can see out across the immense vista of the game landscape in all directions: a huge, unknowable space that would take lifetimes to explore.

Upon landing, the player is able to see now only their immediate surroundings, though they have a sense of the terrain that awaits their exploration. Also, they are only able to move at the relative speed of a human being in this world. While most 3D games "empower" the player by allowing them to move at relative speeds about 40-50 miles per hour across the virtual terrain, the player of the Night Journey must be satisfied with pedestrian speeds calculated to enforce our goals of moving slowly and looking deeply at each moment of the experience.

The underlying terrain itself will have fixed landmarks, in order to allow the player to perceive change from play to play. However, the overall experience of the landscape will be different in detail, including changes to texture, models and an emergent "micro" landscape that will slowly appear should a player move slowly and carefully enough to notice the changes.

One example of this "micro" landscape is in the repetition of a certain visual pattern in both the highest levels of the landscape and also its smallest features. So, while the player falls down the vertical pole, it is possible that they will notice a pattern of canyons leading to the desert area. These canyons are complicated, but traversable. One way of "finding ones way" through them is to look at the pattern of leaves in the forest area, because the very same pattern that generated the canyons is seen engraved on several leaves of each tree. This is a fairly static example; another example would include the layering of "seasonal" textures, which will dynamically change should the player stop and wait, focusing on a particular view. Also, emergently generated creatures will be visible as part of the micro world.

The concept of a game environment that changes from play to play, choice to choice, and organizes itself visually and aurally around the sense of aporia and epiphany embodied in the archetypal spiritual journey was very exciting to us. We felt that this concept of creating a "generative geography" expressed both interactively and visually one part of the "mechanic of enlightenment" we had been searching for. It is, also, one of the most technically difficult aspects of the project, however, and the most demanding in terms of real-time performance.

Textual References

One of our original design goals included integration of several inspirational of texts noted above. As we have moved through the design process, we have gone through a number of potential ways of including those texts, from direct visual and aural reference, to a carefully constructed set of "narrative" moments that could be "found" in the landscape in any pattern, morphing meaning from play to play.

At this point, we are finding that these direct references may, in fact, fade away giving preference to an experiential journey heavily inspired and influenced by their vestigial presence. Bill Viola has explained to the team, "there is text in *all* my work," though that text may not be directly visible to the viewer.

3) Game Design Process vs. Artistic Process

Once high-level design goals were set, the team's first step in the game design process was to create a paper model of our ideas and playtest it. This prototype was a playable system that helped to focus on several of the important issues surrounding the merger of our ideas, player motivation, basic game procedures and consequences of actions.

From our discussions with Bill Viola, this creation of a paper prototype was intriguing, but somewhat outside of his usual artistic process, which tended towards reading, writing and drawing sketches of ideas. As part of the design process, he gave us several sketches of the landscape concept for the game which inevitably informed both the visual and the procedural designs.

(Insert landscape sketch)

Game Structure

The paper prototype was created as a single-player game map with another participant acting as the AI for the game logic. After lengthy discussion, a set of test procedures were created for the prototype map to guide the player on their journey. These were imagined as "ways of being" in the world, such as being "still," being "courageous" and being "loyal" to one's original path. Based on the choices the player makes, rules were applied to the landscape, making orientation and visual reference more or less difficult.

The player begins in the center of the four spaces described earlier: forest, mountains, desert and sea at the start of each "night." They traverse the landscape toward one of four

distant goals, encountering "clues" and other narrative events along the way. At the end of each "night," as the sky lightens, they "fall" through the earth and back down the vertical pole to the center of the map once again. Each day's journey offers them a chance to re-trace their path or strike out in new directions. Whatever choice they make, they will encounter new content in the landscape.

Playtests

The playtests for the paper prototype were done very casually and internally, as part of an ongoing discussion regarding the game structure. Several game design students, the USC design team and Bill Viola were the only test subjects. The learning and discussion that came from this prototype centered on the notion of how the player accesses and understands the underlying rules of the game world.

Figure 3: Bill Viola and Tracy Fullerton playing the paper prototype.

Paper prototyping, as mentioned above, is a central part of the play-centric method of game design. However, the design of this prototype assumed that the focus of the player would be on procedural mechanics, rather than on creative interpretation. It became clear during this process, that we needed to test more than just system mechanics, but also the player's interpretive experience as well.

Just as traditional film and video may assume an underlying narrative to "carry" the experience of the view along; so does traditional game design assume a reliance on repetitive, systematic actions within a goal/reward system to drive player interaction with the game. Our discussions with Bill Viola made us realize that while the overarching structure of the prototype worked well enough to describe the physical layout of the game, the model itself could not articulate the creative, interpretive experience required for our high-level goals.

In the end, it was decided to begin implementing the basic game map and "night" cycle structure in a digital environment, and to concurrently build a set of procedural tools which would allow us to implement the visually and procedurally emergent environment described earlier in this document.

The digital prototype was next created using an internal game engine, Bushido. The engine was modified in several ways to realize the game, including simplified movement via mouse movement, dynamically generated terrain and changes to terrain based on speed, location, and proximity to certain landscape points.

As the digital level has taken shape, the potential design possibilities have become clearer to both the team and to Bill Viola. It is clear that our *development* process has in many ways continued the original discussion as to high-level *design* goals. Unlike a traditional game design process, which tends to focus on feature development, or even a play-centric process, which will tend to have fairly stable high-level goals and a flexible, iterative methodology for reaching those goals, the Night Journey's design process has been an ongoing philosophical trek throughout.

We are not concerned about this difference of process – in fact, the entire team has seemed to become clearer and clearer as to the benefits of this process as we proceed. It is not a journey of milestones and deliverables, but one of discoveries and insights, much like the one we are trying to create. In many ways, it is a productive merger of game design methodologies and an artistic process. Whenever we voice the concern that a new idea may not be "doable" we receive a happy confirmation from Bill Viola that this is how we know it is "worth doing," because it is untried territory.

4) Conclusion

The Night Journey is an ongoing project, and, as mentioned in the introduction to this paper, it remains to be seen how successful its design elements will be in the end. However, the team itself has already found its own success in the sense that we have found a common territory for collaborative, creative work between the different processes of the visual and interactive artists involved.

Overall, we feel that we have found the beginnings of a fascinating interplay between the process of game design and the process of one particular visual artist, Bill Viola. As opposed to the focus on "fun" that traditional game design uses as a benchmark, the high-level experience goals used by the play-centric method, or even the learning-based goals set by "serious" games, we believe we are on a path to discovering how aesthetic goals and the "voice" of a particular artist may be integrated into the game design process.

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