

Real Time Art Engines 3: Post-convergent creative practice in MUVES.

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ABSTRACT

In this paper, I describe a possible creative model for approaching realtime 3D Multi-user Virtual Environments (MUVES) as formal, abstract audio-visual composition environments. The model is a result of my practice-based research, creating audio-visual art work in Second Life and other realtime 3D MUVES. Some of the conventions and approaches of musical composition, sound art and visual art are considered and compared. These approaches are evaluated within the context of realtime 3D MUVES, and compared to a post-convergent approach attempting to identify some qualities native to the realtime 3D MUVE.

Keywords

Multi-User Virtual Environments, Second Life, Audio-Visual Composition, Post-Convergent Space.

1. Introduction

Much research and critical theory around virtual environments approaches these environments as a primarily visual form. This can be seen as a pre-convergent approach, where the media that are synthesized in the creation of virtual environments are treated as discrete elements, without recombinant influence on each other. In a realtime 3D Multi-user Environment (MUVE), such as Second Life, these discrete media-elements can be enumerated as vision, sound, time, social interaction, network and information navigation. A realtime 3D MUVE can be described as post-convergent. In other words, when experiencing a realtime 3D MUVE, the user encounters a synthesis of all these media-elements, each in symbiotic relationship with each and all of the others. This symbiotic relationship perhaps reflects the structure of the network that enables the MUVE, and the act of experiencing a realtime 3D MUVE requires engaging with this post-convergent space in a fluid relationship.

2. Conceptual Approach

Since realtime 3D MUVES are a relatively recent phenomenon, many of the approaches to creative practice within them owe a crippling debt to one of the media-elements above all the others. This is particularly true of the vision media-element. This approach fits with McLuhan's well-known maxim that any new medium is initially used to imitate an existing media form [1]. Examples of this, in the form of faux-realist representational picture galleries with framed pictures 'hung' upon 'walls', abound throughout Second Life. The ontological spiral of self-redundancy suggested by this practice amply highlights the problems that

notions of the screen as frame or window or mirror encounter in the post-convergent space [2].

Of the other conventional media-elements, perhaps sound has the most precedent in negotiating the kind of issues raised by post-convergent space. Pierre Schaeffer's influential concepts of *objets sonore*, sound objects or "pieces of time torn from the cosmos" [3], and reduced listening have been more or less fully integrated into the mainstream of musical production and consumption. Beginning with Schaeffer's *musique concrète* in the 1950s, picked up on by the multi-track studio experimenters of the 1960s pop/rock movements, expanded by the synthesiser artists of the 1970s, in turn developed by the sampling turntablists of hip hop and techno artists of the 1980s and finally into the full blown all-digital process of mainstream commercial music production in the 1990s, an arc traces the metamorphosis of music from a recorded representation of real world practice to an abstract space, absorbing and acknowledging past conventions whilst conforming to an internal logic of its own devising.

Further, the concept of music itself is really an arrangement of abstract sounds, usually according to a technologically-determined formalism. The listener is expected to engage with the composer and/or performers in order to consciously enter a non-empirical space in which all constituent elements are without context other than their relationship with each other within the constructed space. In retrospect, it seems that music was already an exercise in *objets sonores* and Schaeffer was actually calling for a widening of the highly codified system of music to embrace other non-"musical" sounds and structures. His call was heeded by musicians and accepted by mainstream society. This practice has been achieved without obviating the representative role of the auditory sense in the real/physical world. The process of creating music or sound art involves manipulating sound objects, within a formal abstract system, that achieve context only in their internal symbiotic relationship with that system and its constituent elements. This can be called using the 'native' qualities of the system. This native approach offers possibilities for creating within a realtime 3D MUVE, since it also is a formal abstract system with a context-less, self-referential internal ruleset, albeit a post-convergent one that contains the sonic system as a subset.

The media-elements of network and information navigation do not conventionally exist in pre-convergent space, and these are

the elements that are perhaps the easiest to countenance, both for the user and the artist, because they are the most 'native' to the space. Intuitively manipulating the symbiotic relationship between the network and information navigation, users constantly monitor friends' status on the network and hold multiple non-linear conversations (with partners whose avatars are both visible and invisible to them), all the while arranging, ordering and re-ordering entries in multiple databases or *inventories*. Artists such as myself, AngryBeth Shortbread (Annabeth Robinson) [4] and Brad Kligerman [5] manipulate data from the MUVE to dynamically create partially or wholly data-driven audiovisual work by recontextualising this situated data into different manifestations utilising various balances of all the media-elements. Such practice owes as much to network management and recent so-called 'net.art' as it does to conventional visual art and music. The experience of such works usually relies on the user taking some kind of active role in navigating the work, as well as engaging conceptually with the new relationships created within, and as a result of, the MUVE.

This approach can be seen as manipulating the native qualities of the MUVE. This is not to say that a MUVE (or any rules-based system) may only be approached creatively through a formalism that rejects any reference to systems external to it. Rather, a native approach to post-convergent space entails regarding the space from the meta-perspective of the total dynamic sum of its inter-related constituent elements, not the linear perspective of how individual media-elements within the system relate to their pre-convergent counterparts.

3. Practical Methodology

I attempted to take the native approach with a series of audio-visual works I created in Second Life. Each piece is constructed according to formal rulesets I devised based on what I identified as possible native parameters of the space. These parameters are often clouded by the dominant metaphor used by Second Life, ie, that it is "like the real world". In fact, to a user, this basically means that the visual element of the post-convergent space is drawn to a 2-dimensional plane (the computer monitor) according to conventional principles of perspective.¹ Since the visual sense is treated as the most dominant, and is the least likely to be manipulated according to an abstract system, all other aspects of the system are easily conflated with it, especially by those looking for a quick, precedent-based explanation of the system. The practical effect of this is that the process for manipulating the media-elements has been designed to reflect and uphold the visual metaphor.

For example, sound is only available as digital wave files, and there is no facility for generating or synthesising sounds from within the MUVE itself. Further, each sound file can be no longer

¹ To the owners of Second Life, Linden Labs, the metaphor is more to do with the network and information navigation media-elements of the post-convergent space, since each object within the MUVE is directly mapped to processor cycles and hard disk space on a computer within a real-world server farm. The visual metaphor is very expedient in allowing customers to understand the rules of the economic system without having to understand the physical infrastructure.

than 10 seconds in length. The user has no choice but to abide by these rules, and they can be seen as qualities native to current versions of Second Life, even though they are by no means native to realtime 3D MUVES for any technological reason. They exist to support the visual metaphor, and there is no consideration, within the design of Second Life as a realtime 3D MUVE, that sound may exist independently of external context. Nonetheless, I devised a rational scale (a system of tuning in which all of the intervals can be represented by ratios of whole numbers) based on the ratios of seven, with a total of eight tones within a whole octave.²

Visual and interactive elements were then constructed in patterns conforming to both the system by which the sounds had been generated, and the various systems native to the MUVE itself. Colour was decided, rather simplistically, by dividing the available colour range of one or more RGB channels by the number of tones in the sonic scale. Animation of the visual elements was determined similarly, based on the assigned colour and sound of the element. In many pieces, activation of animation and/or colour and/or sound was determined either by proximity of users' avatars or conscious input by the user. In others, this activation was determined by other, more 'passive' data sources, such as the status of the MUVES internal programmatic "weather" system, number of visitors per given time frame, length of time between visits by any given avatar, etc. At all times, the symbiotic interaction of all these 'native' qualities was given primacy as a 'meta-product', the sum greater than its constituent parts in the post-convergent space.

4. Conclusion

By attempting to identify and work within the native qualities of the post-convergent space, works were created for users who, familiar to a certain extent with the MUVE as a system and the manner in which it diverges from its ostensible visual metaphor, are willing to engage technically and conceptually with the potential such a space offers beyond its relationship with external systems. The works receive hundreds of visitors a day, many of whom return repeatedly over time. Many users comment explicitly on this conscious manipulation of the native qualities of the MUVE, finding it challenging and experientially positive. Based on such unsolicited feedback from these users, as well as empirical observation of users interacting with the pieces and discussions with professional practitioners within the MUVE, it seems that this native approach to creative practice within the post-convergent space will yield interesting and useful results if critically explored further.

All works accessible via
<http://yamanakanash.net/projects.html>.

² This can be seen as a 'native' approach to the sound space itself, since it uses electronic technology to work within "Just Intonation" tuning systems, rather than the twelve-tone "equal temperament" system adopted by Western music in the 16th century due to technological limitations.

5. REFERENCES

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