

Towards a visual taxonomy in New Media Art

Ian Gwilt

The objective of this paper is to discuss possible indexical methods that might be applied to the variety of techniques and processes commonly used in New Media Art. A key part in this undertaking has been the development of a 'visual taxonomy for New Media Art', which it is hoped will contribute to the defining of prevalent forms and trends within the genre. The proposed visual taxonomy can be examined from both a conceptual, and practice based context. Framing a description of New Media in the context of a creative activity that foregrounds the viewers experience, rather than a technologically described model, and is intended to be of interest to artists, researchers, historians, art curators and the art going community.

I will begin with a short definition of New Media Art and the taxonomic concept, followed by an investigation of related indexical examples. I will then step through the objectives of the taxonomy, concluding with a look at the prototype model and how this has been applied to existing New Media Art case studies through a process of data collection and dynamic visualisation.

1. Definitions of New Media Art

Within the ongoing debate over the most appropriate nomenclature of this genre, it quickly becomes apparent that New Media Art is currently the most popular descriptor for a digitally facilitated creative practice. Amongst a variety of alternative terms vying for fashionable acceptance New Media Art has reached a level of collective recognition that terms such as Mixed Reality Art, Digital Art, Variable Media and Interactive Art have not yet achieved. In addition there are also a number of media based subcategory definitions within this area, including ASCII Art, Web Art and Locative Media, with further definitions being added as new, media types are appropriated for creative activity, for example, Mobile, bio and GPS or GIS Art.

This need to name emergent creative practices has a historical precedent – Lovejoy (1997), in her book 'Postmodern Currents: art and Artists in the Age of electric Media', opens her exploration of the field of

New Media with a statement about how the perceptual and aesthetic definitions of art change over time through a collective reading of the tools, practices and conventions of creative media - at any given moment in history. From painting and sculpture, to printmaking, photography and electronic media based artworks such a video and web based art. Lovejoy's text echoes McLuhan's media based definitions of practice and the inherent implications for the message (McLuhan 1967).

The potentials for media multiplicity, duplication and reproduction within digital technologies are obvious, common key factors in a creative New Media Art practice and Lovejoy picks up on Benjamin's position around the fundamental changes in art practice brought about through the possibilities of multiple production processes (Benjamin 1969). Manovich (2001) sees New Media as a confluence of two developing trajectories - media, and computer technologies, and further differentiates between new media activities for distribution / presentation, and new media practice as production. And although many of these positions refer to specific media types or applications, critics agree on the importance of reading the creative heritage of New Media within a historic, socio-cultural framework.

2. Why a visual taxonomy?

The visual taxonomy of New Media Art evolved in part as a response to the ongoing debate led by mainstream art establishments, contemporary art theorists, practitioners and the art going community to define New Media Art, and is a creative, participatory attempt to document and categorize examples of artworks that fall into this domain. Taxonomy is the practice of classification for elements or items that can be grouped together with identifiable similarities; these groupings may be hierarchical or associative and pertain to most animate or inanimate 'kinds' or thematic contents. The most commonly known, and founding taxonomies are the biological classification of systems for associated animal or plant forms (Blackwelder 1967).

In a more contemporary vein, the visual taxonomy of New Media Art can also be thought of as a 'folksonomy'. Coined by the information architect Thomas Vander Wal, the term folksonomy, is derived from the nametags attached to html code embedded within web sites. These tags enable search engines to identify images and information within a specific search and allow for the collection of commonly defined elements (Terdiman 2005). As tags become more commonly used they begin to work as cultural memes, clarifying common social perceptions around a given subject. For example if you execute a search on "New Media Art", your web browser search engine, will search for and collect results from HTML tags that use the term "New Media Art" These results will be based upon a collection of interpretations of "New Media Art", tagged by

authors who wish to be recognized under this name. When seen together these associative grouping make up an emergent, collective understanding for the term.

The reason for developing a visual taxonomy is two-fold; in the first instance the taxonomy is to be used in the evaluation and categorization of case studies where a simple icon driven model will allow a diverse art going audience to quickly review and identify attributes of a particular New Media artwork. Secondly the use of iconic representation ties in with the general theme of my own creative work, which references the language of the Graphical User Interface and an interest in exploring the visual aesthetics of the computer. It should be noted that the author is aware that this is only one possible trajectory for a defining framework located in an emerging field, culled from a series of possible interlinked socio-political, cultural and technological positions.

3. Existing work in the area

There are few existing models within the area of New Media that use the idea of a visual taxonomy. However, there are a number of related examples, which have been developed around archival issues for digital media (Rinehart 2007). In Australia 'the Preservation webservices Architecture for New Media and Interactive Collections PANIC' project have developed a data collection tool called 'PREMINT (PREservation Metadata INput Tool)'. Using a computer based XML form the software document the characteristics of a particular artwork based on formal, conceptual (from the artists perspective), technical and archival aspects of the work (Hunter, Choudhury 2003). The PANIC project gives recognition to an archival project developed by the Guggenheim Museum entitled the 'Variable Media Questionnaire' which is a non-media based attempt to classify New Media under a series of 'behaviors'. The questionnaire describes works through developed, behavior descriptors including, 'installed, performed, 'networked', 'duplicated' and 'interactive' (Depocas et al 2003). Another model for the classification of New Media has been devised by the Dutch Media arts group 'V2_', which takes into account the complexity of contemporary New Media arts practice (Fauconnier, Frommé 2003). V2_'s 'Capturing Unstable Media Conceptual Model' (CMCM), takes a flexible pluralistic approach to the documentation of New Media Art including a symbol based user interface to, describe the implementation needs of a work, types of user interaction, concept, authorship / partnership issues, iteration and the variety of documentation methods employed.

A specifically related scale for defining New Media can be seen in the work of Paul Milgram (1994) and his colleagues, who have written extensively on Mixed Reality Visual Display Systems. Milgram's background is in computer science and engineering, and his

categorization of Mixed Reality foregrounds the technological considerations and display configurations of Mixed Reality systems. Of perhaps greater interest, in terms of defining a Mixed Reality Art experience, is Milgram's work on the concept of the 'virtual continuum'. Milgram's 'virtual continuum' is a linear classification system of an environmental experience that locates the *real*, physical environment at one end of a scale, and an entirely *virtual* computer mediated environment at the other end.

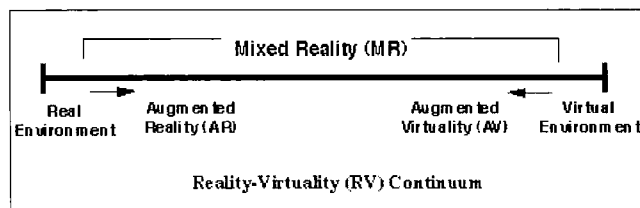


Figure 1- diagram of Virtuality Continuum (Milgram 1994)

It is possible to draw this concept as an illustrated visual diagram. The diagrammatical visualization relates the viewer's experience of a Mixed Reality Artwork in terms of their perceived engagement with the computer; a synthesized environment versus the perception of physical space. By varying the positional relationships between the symbol for a human figure and an icon of a computer monitor we can suggest a perceptual pathway that at one end of the scale places the viewer primarily in a physical space and at the other end of the scale fully immersed in a computer simulated environment, such as the experience of a Virtual Reality Head Mounted Display System (Dix 1993).

The visualized diagram of Milgram's scale has been designed to fit within the New Media taxonomy and the Untitled media data visualization project as an addition to the primarily questionnaire. The scale works as a piece of information design that allows the participant to assign a qualitative level of immersivity to a particular augmented reality configuration. As we will see in preliminary feedback the notion of qualifying immersion with a particular New Media artwork becomes problematic when we begin to think about what constitutes immersion and how one might begin to feel immersed in different ways. In considering the issue of Immersion, Grau comments on the nature of immersion being a key factor in New Media Art and attests to the complexity of the issue saying,

"there is not a simple relationship of "either-or" between critical distance and immersion; the relations are multifaceted, closely intertwined, dialectical, in part contradictory, and

certainly highly dependent on the disposition of the observer.”
 (Grau 2003)

It is apparent that there is the potential to develop a separate, more substantive evaluative model to solely address immersivity in New Media artworks.

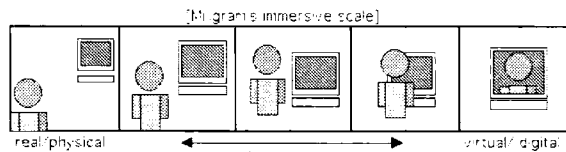


Figure 2 – Visualization of virtual continuum diagram

4. The first mode: The Untitled Media Project and the Visual Taxonomy for New Media Art.

The visual taxonomy for New Media Art is a key part of the Untitled Media project, a creative work based on a sudo-scientific data collection and visualisation process which attempt to address the mutability of contemporary, digital enhanced New Media artworks. Developed by Ian Gwilt, Elisa Lee, Shigeki Amitani and Adam Hinshaw the Untitled Media project is a location-based activity, which can be attached to any New Media arts festival or conference. A small team of Untitled Media artists and volunteers collect information from visitors to artworks at a gallery or festival location. The collected information is then fed into the Untitled Media database and the resulting information is visualized as dynamic information system; made available for public consideration and feedback both at the event and on the Internet.

Taking the form of a paper based, tick-box survey, visitors to a New Media gallery or exhibition complete the visual taxonomy questionnaire as they enjoy the gallery experience. The questionnaire is comprised of a series of diagrammatical representations of characteristics from typical New Media artworks. These symbols represent aspects of technical set up, media content and user experience. The symbols can be divided into two types - those that describe the physical and digital composition of the work, and those that document the intended interaction between the viewer / participant and the work. In this first iteration twenty symbols with accompanying descriptive texts have been designed and arranged in a formal grid. The participants tick the appropriate icons that they feel describe a particular New Media artwork and are invited to select a point

on the immersivity diagram that represents their level of engagement with the work. The twentieth element in the symbol matrix is left blank so the researcher or audience participant can add their own description should a particular feature of an artwork not be included in the main list.

The completed questionnaires are collected and this information is fed into the database system, which informs a dynamic computer generated visualization of the data. Throughout the duration of the show the completed forms are also displayed in the *Untitled Media activity area* as an ongoing review of the artworks and a physical documentation of the project. As each element in the system can be compared to the typical elements in a New Media Artwork, by noting the frequency that each symbol is selected from questionnaire to questionnaire, it is possible to begin to record commonalities and establish patterns of repetition in the New Media Artworks at any given event, at any particular date.

As an alternative to the paper based survey, we developed a software version that could be completed on a hand-held computer device, this allows for a more efficient data transfer to the *Untitled Media* database but is limited by the number of devices available. In subsequent versions of the project participating galleries will be able to download the blank survey from the *Untitled Media* survey website for use during a particular event. Additional information such as descriptions of work and images from the show will be included on the website to help contextualise the completed surveys.

5. Initial findings

The *Untitled Media* project, survey of New Media Art was undertaken at the new media arts Festival "ZeroOne San Jose: The Global Festival of 'Art on the Edge' co-hosted with the Thirteenth International Symposium of Electronic Art (ISEA) in August 2006. Initial findings from the first showing of the work revealed some surprising results, the most interesting of these being that the majority of artworks surveyed returned a positive result (ticked box) for artworks containing a 3 dimensional artifact as a component piece of the work. Five to ten years ago there would have been more emphasis on screen based content and interaction with the types of screen based navigation systems we more commonly see on the Internet. This result suggests a move in recent New Media artworks towards Mixed Reality constructs, which contain embedded technologies within physical artifacts.

Another interesting result from the first reading of the *Untitled Media* data is that, not surprisingly there is often a difference of opinion between people surveying the same artwork, with participants ticking differing combinations of symbols. This suggests a diversity of interpretation or perception in what it is the audience members are

actually experiencing. Perhaps related to this last point, the immersivity scores on the Milgram's visual scale often tended to the lower level of the immersivity continuum. This may point to a lack of understanding of how to read New Media works, or it maybe a reflection of how the artworks were placed in the physical gallery or exhibition space. This low score for general immersivity does not necessarily need to be read as a negative however, and may point again to towards the growing importance of a located experience in New Media Artwork and how the physical digital content nexus relationship is changing.

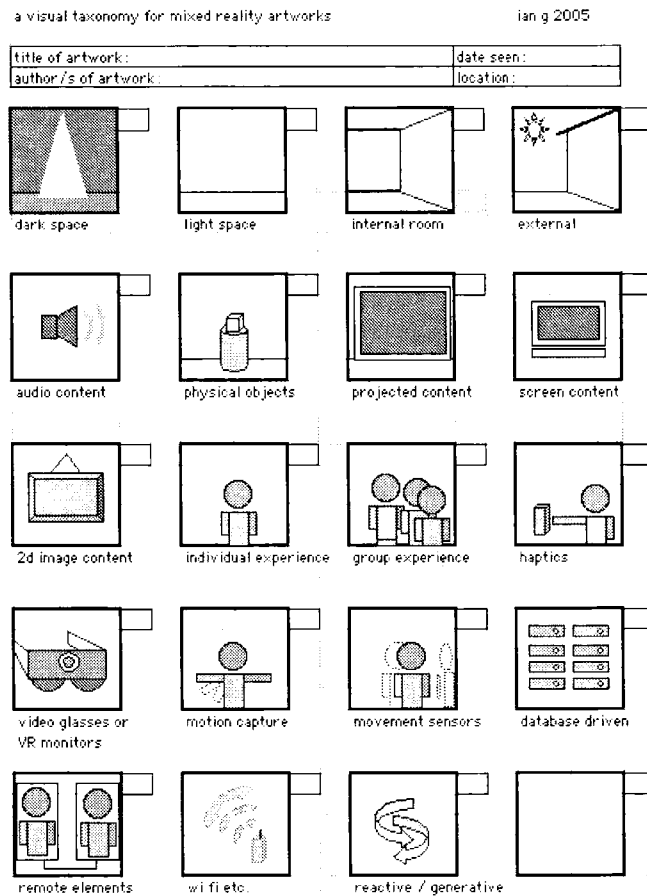


Figure 3 – 1st iteration, visual taxonomy for New Media Art (Gwilt 2005)

6. Conclusion

In his paper entitled 'a taxonomy of mixed reality visual displays' Milgram identifies the need for a taxonomy of Mixed Reality to help negotiate the merging space of real and virtual world. Milgram refers to "...problems of inexact terminologies and unclear conceptual boundaries", which appear to exist in the technological research of Mixed Reality (Milgram 1994). When we consider Mixed Reality from the perspective of contemporary New Media Art practice, we are faced with the same problems in establishing conceptual and practice based boundaries. As the term 'New Media Art' although currently the most accepted term, becomes an increasingly unsatisfactory descriptor for a technologically facilitated art practice, a visual taxonomy for New Media Art is an interesting benchmarking device that might be used to establish the parameters of this new genre. Furthermore a visual taxonomy may help validate a practice that does not easily fit into the perceptual mindset of an art going audience or indeed the categories of recognition for the arts council funding bodies or gallery curators.

Not forgetting that the initial idea behind the Untitled Media project and the visual taxonomy for new media was a slightly tongue-in-cheek pastiche of scientific quantitative research techniques - the choice in the 'excel' based visual iconography within the survey and the simple, business like aesthetic of the bar chart visualizations hint at this reference. As does the 'paper based' survey - an ironic use of traditional media. The work can still simply be read in this as way a creative work, although it is hard not to return to what Peter Lunenfeld (2001) refers to as the social need, "to categorize cultural production (particularly) after it goes digital..." as appose to the "...need to map out the historical precedents that support and subvert our contemporary cult of the new".

The seduction of naming and categorizing as a means of qualification seems to be as strong as ever and appears even more critical when we consider the increasing volume of digitised data that needs to be sifted through in a typical web search. Anecdotal feedback from discussions with the public at the ISEA Untitled Media event, uncovered a common desire to grade the data collection results based upon the quantity of results. In fact, the work is non-competitive in the sense of seeking the best or worst instances of New Media Art - The taxonomy purely attempts to identify common typologies, examining technical set up, media content and user experience. The taxonomy looks at formal qualities of New Media Art and does not address content or creative meaning, as Lunenfeld says,

"...too often we marvel at the products of new media not for what they mean, but merely for the fact they are." (Lunenfeld 2001).

In a simple way, by identifying and demystifying the elements of New Media Art we can begin to move beyond a mere technological fascination with the genre.

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ENGAGE: Interaction, Art and Audience Experience

A CCS / ACID Symposium

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Editors:

Ernest Edmonds

Lizzie Muller

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LIST OF CONTRIBUTORS

Editors:

Ernest Edmonds

Creativity and Cognition Studios
Faculty of Information Technology
University of Technology, Sydney
Australia
ernest@ernestedmonds.com

Lizzie Muller

Creativity and Cognition Studios
Faculty of Information Technology
University of Technology, Sydney
Australia
lizzie@lizziemuller.com

Deborah Turnbull

Creativity and Cognition Studios
Faculty of Information Technology
University of Technology, Sydney
Australia
deborah@it.uts.edu.au

Authors:

Hanif Baharin

Universiti Teknologi MARA
Perlis, Malaysia
ahmadhanif@perlis.uitm.edu.my

Susan Ballard

Art Theory,
Otago School of Art,
Dunedin, New Zealand
Su.ballard@gmail.com

Dr Kirsty Beilharz

Key Centre of Design Computing and Cognition
University of Sydney
Australia
kirsty@arch.usyd.edu.au