Techno Trans-nationalism

Abstract: In experiencing the world, globally, via satellites and sensors, how do artists respond to this techno trans-national environment? Collaboration in this new environment for art is a key aspect of such techno-connectivity. Techno trans-nationalism is expressed in every lag, pixilation, layering of software within communication technologies and its tools; tools that can be used for collaborative, creative and performative art practice. Here one must account, also for human distraction, delayed response and miscommunication. Such disjointed elements can also become incorporated into the technology as human ingenuity. This paper addresses the implementation of and opportunities regarding issues of distribution and the effect this can have on internet art practice.

The general consensus is that trans-nationalism refers to multiple ties and interactions linking people and institutions across the boundaries of nation-states. As people move across the globe for various reasons, regional autonomy is no longer restricted to nation-states. New modes of communication have provided people with wider access to share their ideas. Techno trans-nationalism provokes a different debate about the nature of art practice on the internet and enables exchange to be seen in another context. Techno trans-nationalism highlights marco approaches or narratives that reveal mutiple sites of activity of group determination. Distribution and collaboration are essential factors occuring between artists working on the internet.

For a long time the concept of virtual space has dominated theories around movement, space and time in art practice and computer technology. Virtual space is still significant and dominates computer based practice even in 21st century. Vince Dziekan in his 2007 essay "Beyond the Museum Wall: Situating Art in Virtual Space" uses the term 'phase space' when finding different ways to reconfigure art in a virtual space in a museum or gallery. It is meant to enable art objects to have a body, dimension and contour in virtual space (Dzieken, 2007:7). The term 'phase space' is borrowed from Brian Massumi's 2002 essay "Parables for the Virtual: Movement, Affect, Sensation", where Massumi describes it "as the organisation of multiple levels that have different logics and temporal resonance with each other and recapitulate the same event in different ways" (Dzieken, 2007:7).This essay does not ignore the importance of virtual space but uses the multiple level of flowing systems to understand how distribution works on the internet. Massumi's definition of 'phase space' is more suitable for the understanding of techno trans-nationalism. While Massumi concentrates on time to ensure their is a free flowing system that can evolve. This essay takes into account that time can be disruptive but even when disconnection on the internet occurs distribution and

collaboration still take place on the internet. Distribution, in this sense is temporal, and does not prevent collaboration between artists. Yet, Massumi, equally confines the physical and virtual body in a multiple level and temporal space "Movement as qualitative transformation is lacking. There is 'displacement' but no transformation, as if the body simply leaps from one definition to the next" (Massumi, 2002:4). Distribution in the context of this essay is not related to the physical or virtual body but is connected to a form of art practice. There is another area that dominates internet art practice that equally needs to be considered briefly. Information Technology (IT) and its rigorous relationship with mapping is part of internet culture. Information Technology involves the study of design, development and management of computer based information systems. Network production structures are produced to categorise any form of data and information data is vetted by rating systems. What happens is that data is mapped across the internet by following web links and web services via Identification Personal addresses (IP). It is the content of data which network production structures are interested in. Yet what is not taken into account is how any information is distributed across the internet. Artists working on the internet depend heavily on distribution and as technology develops distribution becomes easier. Dzieke's use of the word contour is relevant. Distribution is the contour of the internet.

There is one particular website that operates between mutiple levels. It corresponds to a 'site' that overlapps and changes. According to Matssumi "multiple levels are coded/or can occupy another position which is coded in a different way (Matssumi, 2002: 3) Pixelache Helsinki which formed in 2002,

> "Is an informal network of electronic art, festivals and sub-cultures. It presents projects based on media, technology by artists, engineers, designers, researchers and architects. Pixelache focuses especially on presenting activities of various international grass root networks and communities"
> (http://www.pixelache.ac/2005/about-pixelache-festival/).

Countries attached to the Pixelache network are: Pikslavaerk-Reykjavik (Iceland); Mal Au Pixel (Paris); Pixelist (Istanbul); Pixelaza (Santa Marta,Colombia/South America); Pixsel-Bergen (Norway); Afropixel-Dakar (Africa) who joined in April 2009 and Pikselvark-Stockholm (Sweden). Every year Pixelache Helsinki co-ordinates a network festival. Each network member promotes their own artists, engineers, designers, architects and researchers during the festival. Simultaneously they are encouraged by financial aid, in-kind support to work internationally. In 2009 the Pixelache Helsinki festival took place in April and there were eight themes: Alternative Economy Cultures; Artskill Art; Audiovisual Hacking; Art, Science and Ecology; Digital Craftsmanship; Live Video Lab; Signals from the South and Open Forum.

Some of the themes interlinked but the main priority of this festival is the use of technology to engage with different ideas. Alternative Economy Cultures aimed to tackle the social, cultural, institutional, financial, material, emotional and intellectual forms of capital, while Art, Science and Ecology explored how the architect Buckmister Fuller and his ideas of sustainable living can be communicated to the general public in the 21st century by the use of technology. Audiovisual Hacking looked at the potential of creating images, light, visual and pixels from electronic junk, discarded toys and cheap components. Digital Craftsmanship set out to discover what can be made with easily accessible technology but making sure it could be paradigmatically different from traditional production methods. Live Video Lab offered a laboratory programme that encouraged discussions about the current state of live visuals. They used examples from visual music, video art, experimental cinema, club culture and remix culture to generate debates. Open Forum consisted of short presentations on recent projects and works in progress. Signals from the South showed case projects from South America, Africa and Asia. Artskill Art promoted experimental audio visual and sound art. Artists had to conceptualise and design an object that explored the quality, complexity and limits of different media (http://2009.pixelache.ac/festival/programme/).

The Artskill Art programme involved the Spanish electronic instrument designer and sound artist Diego de Leon. He was recorded creating a sound art object (live video can be seen at http://vimeo.com/channels/pixelache/page.5). Below is an image of one of his finished works (Fig.1). His work involves generative art processes. The term Generative Art was coined by Philip Galanter. It is art that is generated, composed or constructed in an algorithmic manner by computer software, mathematical or randomised autonomous process (www.philipgalanter.com). Generative art is not an ideology or art movement. It is a method of making art without having to consider the content of the art that is being made. The process of making the art work is very much part of generative art. It is possible for artists to put in place templates that other artists can use and develop. Genertaive art process is liked to distribution as a tool of artistic practice.

Fig.1. Diego de Leon, Untitled 2009. Artist Collection.

Diego de Leon as an important artist promotes the Open Source philosophy. Artists can download software and practical information from his website enabling them to create their own artworks. He provides artists with the skills and technology. Open Source is a term that was first used by Christine Peterson in 1998 at a technology seminar in Palo Alto, California. Open Source decision making and operation is applied to the production of software source code that ignores copyright issues. It can be used as a form of artistic collaboration or for individual work. The growth in personal computers and general access to digital media facilitated the development of open source culture. This is the creative practice of appropriation and sharing creative content without the restrictions of copyright. When Afropixel joined the Pixelache Helsinki festival in 2009 their programme was called Pure Data: Open Source programming tools. The Bricolabs

workshops downloaded material from Diego de Lion's website. In the image (fig.2) you can see artists making a piece of sound art. In the process of distributing these workshops and creativity to other artists Afropixel's own website www.afropixel.org provided information and photos of the workshops, they produced the Bricolabs Video which can be watched on http://www.youtube.com/watch/v=QP15s83_TK or can be down loaded as 16MB Quicktime video. There was also a recorded radio interview on the BBC World Service. Distribution of workshop creativity is evident in moving and still images, sound from the BBC Radio interview, including general text on the website. Distribution sources ensure that artists can comprehend the project through different experiences. There are no instructions indicating what direction the artists should follow to gather the information. It is possible for artists to click on to more than one web link and open many windows.

Fig.2. Bricolabs. Afropixel. 2009. www.afropixel.org

This programme was significant for Africa in general. The first Afropixel project reinforces the interest in technology in Africa. Afropixel was supported by the Ker Thiossane, Villa for Art and Media, a Senegalese association which received funding from the Canadian Daniel Langlois Foundation for Art, Science and new Technologies. Ker Thiossane founded in May 2002 is headed by the artist Francis Momar Sylia. The Bricolabs workshops fit easily into the themes Artskill Art and Signals from the South. Bricolabs is not about a particular tribal or regional identity. Artists involved in the workshops had come from different African regions. Africa's further commitment to technology is evident in another project WiKiAfrica/Palabre

(http://en.wikipedia.org/wiki/wikipedia.WiKiAfrica). This is a project launched at Afropixel is supported by Wikipedia through different networks, research projects, publications, audio visuals and events.

These approaches to distribution can be compared with the 1990s 10_dencies project by Knowbotic Research. This is a German-Swiss group that formed in 1991 who experiment with the intersection of technology, information, knowledge, interface and network agency. Knowbotic Research is committed to the idea of democratisation, de-individualism and do lots of group projects. 10-dencies (fig.3) is a urban city project that took place in three countries, Tokyo, San Paulo and Berlin.

Fig.3. Knowbotic Research, 10-dencies, 1997. www.krcf.org/krcfhome/

For this project generative tools were used as predefined principles to prevent

people making individual decisions about the process of the project as they interacted with the exhibition. Knowbotic Research wanted to control public interaction. The project provided an interface via technology and real exhibition space by which many people could participate simultaneously. 10_dencies was a data mapping project about urban cities and in the process of categorising data the user is represented by visualisation of their browsing activities in a virtual space i.e.10_Dencies_browser_window. Each process occurs within a tendencies forcefield represented by visual imagery, text and sound. The visual imagery in the forcefield became textual keywords when the user zoomed in on the images. For sound the user has to follow other instructions. Data mapping is the foundation of the project but it is the way in which the information during the exhibition is distributed to the public. Visual sources enable the public to explore the external city in the actual exhibition space; text provides detailed information about areas and buildings, while sound in the exhibition space helps to create the environment of the city. The distribution of all these sources is the foundation of the exhibition.

However, this project does depend on the virtual space within a gallery context. Dziekan in "Beyond the Museum Wall: Situating Art in Virtual Space" states that "virtuality is determined by the productive capacities of its social space" (Dziekan, 2007:4). He wants the art object to be dematerialised but does not consider the significance of art made on the computer "I will not be addressing Net art in any explicit way. Instead I will entertain the possibility of transplanting art in the broader sense of its cultural construction to the virtual site of the internet that disrupts art itself" (Dziekan, 2007:5). In his essay curatorial issues related in the displaying of computer art has to comply with institutional rules of engagement. Sarah Cook in her essay "Toward a Theory of the Practice of Curating New Media" also recognises the need to dematerialise the art object "Formalist aesthetics and its attendant value judgements must be revaluated if we are to understand the often relational aesthetics of new media" (Cook.2003:169). Sara Diamond in her essay "The Challenges of Collaborative Exchange and New Media Curatorial Practice" gives a different reflection on the relationship between computer art and the gallery,

> "Gallery and museums continue to work with new media artist who favour collaborative forms and audience participation in their practice" and "Curators are crucial links in the network of new media art. Collaboration and collective action-in writing, speaking, remixing, posting, moving, or interacting-are means to construct identities through roles and transactions, and new technologies implicate curators, artists, and technologies into a network of pre-existing structures while allowing them, at best, to invent new cultures and identities and remap the network itself" (Diamond:2008: 135, 156-7).

Both Dziekan and Diamond do consider how to incorporate computer art in a

gallery context. The Collaborative approach Diamond focuses on is understood as a process between artists. Yet the collaborative approach also has to involve audience participation as performer or spectator. This is evident in 10_dencies where the audience is a participator and for Dziekan the art work is not a static art object but is a more free flowing art work that demands openness and consciousness of process. The Whitney Museum 2001 exhibition "Data Dynamics" was a collection of art works that relied on audience participation. Mapping data, audiences' images in a physical and virtual space showed various opportunities of data models and audience involvement.

Another online art organisation that uses the data mapping process but takes a different approach to how its users interact with the web is Mongrel. This is an international artists group working in digital media on the internet. As the project NetMonster (Fig.4) produces data systems it has to consider how the user distributes information from other sites to enable the art work to evolve. *Trade* is one of the images in NetMonster.
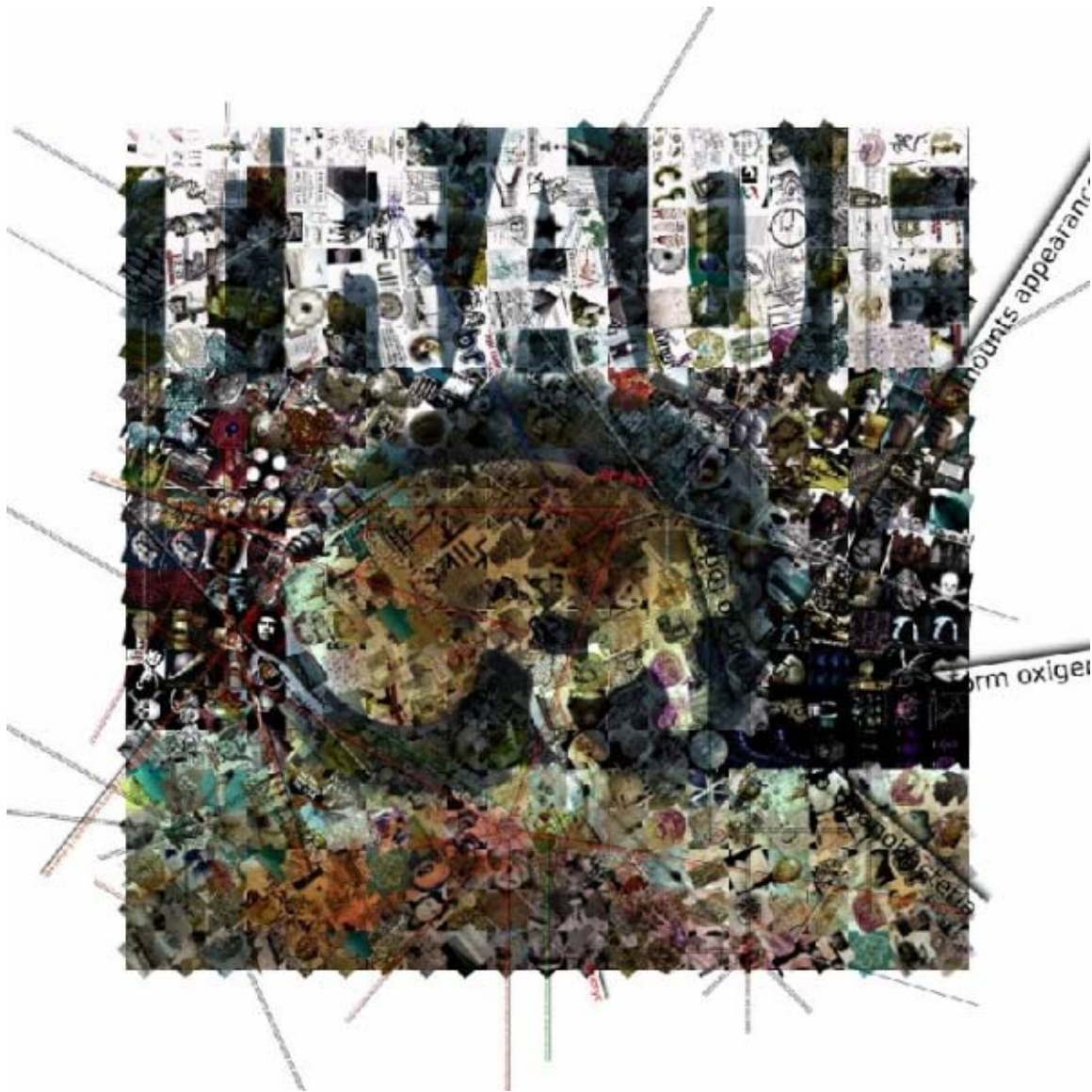
Fig.4. Mongrel, Trade, 2006. www.mongrel.org.uk/netmonster

Mongrel's NetMonster asks the user to select a "set of key search words. It is designed to generate, edit and continuously upgrade a composite 'networked image' out of the images, text and web addresses" (www.mongrel.org.uk/netmonster). Similar to 10_dencies generative tools are used as predefined principles giving Mongrol control over the process of the work. Yet unlike Knowbotic Research, Mongrol allows artists to use their own data information which has been researched on the internet. Artists have the freedom to distribute any images and texts to the NetMonster site to help the image evolve. When you zoom into *Trade* it is possible to see most of the images and texts which

creates the whole image.

Artists working with computers are equally interested in how different technology enables them to expand their practice. The generative art process allows computer codes such as algorithms to be recognised as prerequisite codes in computer programmes that allow software to be used as tools for art practice. Algorithms are decimal numeration systems. Algorithms codes in computer technology works in digital and wireless computers which both depend on signal processing. To be connected to your computer you need to ensure that you have network coverage. Wireless Signal Processing has also enabled distribution to increase in a wider context and is a prerequisite system of the internet which equally becomes a tool for art practice. Wireless Signal Processing which provides network coverage takes place in a multi-centred site. This means that it is possible to connect and receive network coverage from different sources. The multi-centred site supports many types of signal calculations especially asynchronous digital interface. Developments in technology now allow Wireless Signal Processing and Digital Signal Processing to run parallel to each other due to algorithms code inputs in the processing system. This means it is possible for artists to use their laptops as ordinary computers that are fixed in one location because they need the various electronic wires that connect the laptop to wall sockets or they can buy particular wireless modems that connect to their laptop giving them the freedom to make art any where. Proliferation of paths and connections between parallel processors has to respond to pre-given spaces. These spaces can be either be where the artist lives or another country. In pre-given spaces signal processing goes beyond national-state boundaries. Between Wireless Signal Processing and Digital Signal Processing overlaps and conjunctions can occur, but paralleling of processes in our present day computers requires signals to maintain overlapping and also allow for interleaving. In the Pixelache Helsinki April 2009 Festival Bengt Siolen and Adam Somlai-Fischer created the Panoramic Wifi Camera (Fig.5).
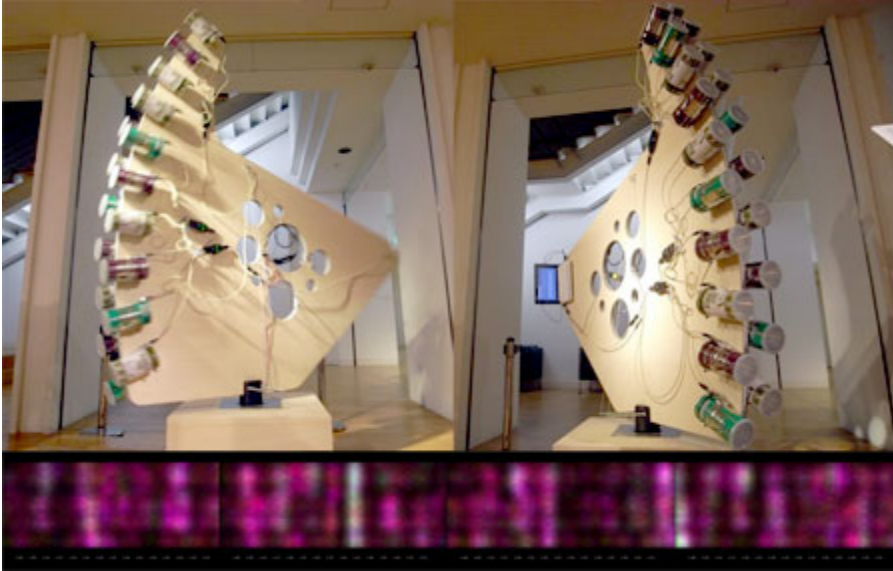
Fig.5. Adam Somlai-Fischer and Bengt Siolen, WiFi Camera, 2009.
www-aether.hu/panoramic-wifi-camera.

The camera captures WiFi air waves and record the wireless networks signals as
visual images on a computer. The camera uses an antenna fabricated from tins.
This antenna is then placed on a robotic head that can be rotated. Similar to Diego
de Leon, Adam Somlai-Fischer supports the Open Source philosophy. He is also
an architect who works on collaborative projects with other artists. He allows artists
to download samples of software, texts and ideas to create work from his website.

Apart from signal processing it also needs to be made clear that the introduction of
Web.02 after 2001 has equally increased the possibilities of distribution via the
internet. Peer-to-peer (P2P) file-sharing is another option for distribution.
Peer-to-peer networks enable the user to download programs where any type of
digital content can be placed on the computer. Examples of peer-to-peer software
available in 2009 are: Gnutella; Limewire; eDonkey and eMule. Artists find file-
sharing provides them with the opportunity to share art practice and work with free
promotional tools such as Freenet which offers anonymous file sharing
programmes. Freenet obscures the user, network location and the destination
of a data access. The user inserts a file or HTLM page to the network that consists
of nodes. The user closes down their node once the file or HTLM is stored in the
network. Nodes send messages to each other, context in the file or HTLM is
encrypted and replicated across participating computers. Once context is
encrypted it becomes difficult to discover which participant is the host.

Off course distribution is affected by global censorship. Alongside anonymous file sharing programmes it is possible to block peer-to-peer file sharing if users establish a temporary Identification Personal address (IP). This could cause problems if the web server host chooses not to accept temporary addresses restricting accessibility to the internet. Secondly, most countries will have a content filter system that is passed through central filtering software. The software attends to hold a list of banned website addresses. A proxy server reviews all web requests and block access. Proxy servers can ban websites even when multiple websites share Identification Personal addresses. It is also possible to block a particular page on a website while ensuring other pages are accessible. However, apart from peer-to-peer software other types of software have been developed to help overcome this type of censorship. Dynaweb Freegate is maintained by Dynamic Internet Technology. This software uses encryption and compression algorithm to work against censorship software. Dynaweb Freegate is available in all languages including Chinese Mandarin and Cantonese, as well as Arabic.

Understanding different languages can be a problem for distribution. However, after the prototype Translation Map was formed in 1989, which was set up to facilitate collaborative multi-lingual conversations worldwide, there are now many free or paid translation websites on the internet offering a number of languages. It is possible to have English translated into Chinese, German, Russian Dutch to French, examples of software are: Prompt text; Babelfish text; FreeTranslation text and Systran text. This helps artists to distribute files and art practice across the internet. Even Chinese artist have access to Pixelache through Google-China. This does not mean that all translations are prefect. In some software programmes do involve people who have an in depth knowledge of the language they are translating while others do not. There are a number of many multi-lingual art websites that translate their content to make information and discussion about art practice available to other artists. Rebel: Art is an example of this. In the image an art project is translated from German into English (Fig.6).

In dieser Schule träumten die Frauen, die bei Metro an
der Kasse arbeiten, von einer Karriere im Ausland.
At this school the women working at Metro's cash desks
were dreaming about a career abroad.
Novi Beograd, Blok 23

Fig.6. Rebel: Art.Untitled. 2008-09. www.rebelart.net/diary

What this essay has attempted to do is highlight how distribution as a tool of art practice for artists working on the internet is diverse. There are certain ways that computer art can work in a gallery context but other forms of computer art does not lend itself to a gallery exhibition. Even though galleries and museums are finding ways to incorporate computer art into their institutions the development of curatorial practices still needs to take place to ensure that galleries can work effectively with artists who use the computer as their site of practice. There are a number of essays that discuss 'new media art' and distribution in a cultural context Sarah Cook in her essay "Immateriality and Its Discontents: An Overview of Main Models and Issues for Curating New Media" states "Lyotard's *Les Immateriaux* is significant for its understanding of the inseperability of the medium and its message in networked culture, the inseparabilty of the distribution method from the work's content" (Cook, 2008: 45). while Joasia Krysa states that "software and its interface…suggests a parallel to other cultural works that acknowledge curating as artistic production [which can be described as] distributed curating" (Krysa, 2008: 101) This comment was based on the Runme.org Project. The curators Olga

Goriunova and Alexi Shulgin want the software repositories to create an exchange interface for artists, programmers and curators which will contextualise software art into a cultural activity However, artists working on the internet require tools like all other artists and it is short sighted just to discuss the cultural relationship between galleries and computer art without considering the importance of distribution in another context.

Bibliography.

Berry, D.M and Moss. G. (2008) Libre Culture: Meditations for Free Culture. Pygmalion Books. Canada.

Cook, Sarah. (2003) "Toward a Theory of the Practice of Curating New Media Art" in Beyond the Box: Diverging Curatorial Practices edited by Melaine Townsend. Banff Centre Press. USA and Ch.2. Immateriality and Its Discontents: An Overview of Main Models and Issues for Curating New Media" in New Media in the White Cube and Beyond edited by Christiane Paul. University of California Press USA and London.

Diamond, Sara, (2008) Ch.7. "Participation, Flow, and the Redistribution of authorship: The Challenges of Collaborative Exchange and New Media Curatorial Practice" pp.135-163 in New Media in the White Cube and Beyond edited by Christiane Paul. University of California Press. USA and London.

Dziekan, V. (2005) "Beyond the Museum Wall: Situating Art in Virtual Space" Fibre Culture. Issue 7, pp1-12. Australia.

Engelhardt,S. (2008) "Intellectual Property Rights and Ex-Post Transaction Cost: The Case of Open and Closed Source Software" JENA Economic Research Papers 2008-047.

Feller, J, Fitzgerald. B and Hissan, S.A. (eds.) (2008) Perspectives on Free and Open Source Software. MIT Press. USA.

Krysa, J, Ch.5 (2008) "Distributed Curating and Immateriality" in New Media in the White Cube and Beyond edited by Christiane Paul. University of California Press. USA.

Lerner. J and Tirole, J. (2005) "The Scope of Open Source Licensing". The Journal of Law, Economics and Organisation. Vol.21. pp20-56.

Massumi, B, (2002) Parables for the Virtual: Movement, Affect, Sensation. Duke University Press. USA.

www.aether.hu/panoramic-wifi-camera

www.afropixel.org

http://freenetproject.org/

www.gimonca.com/personal/archive/foreign.html

www.krcf.org/krcfhome/

www.mongel.org.uk/netmonster

www.open2p.com/pub/a/p2p/2000/11/21/freenetcontent.html

http://2009.pixielache.ac/festival/programme

www.pixelache.ac.2005/about.pixelache-festival/

http://en.wikipedia.org/wiki/wikipedia.WiKiAfrica

Pauline de Souza.
Word Count=2,925.

Keywords:

Techno Transnationalsim.

Distribution.

Wireless and Digital Signal Processing.

Open Source.

Peer-to-peer.