REPORT
CRASSH Workshop "Subversion, Conversion, Development: Public Interests in Technologies" Cambridge, 24-26 April

prepared by Philipp Budka
(University of Vienna)

From the workshop's abstract:
As part of the "New forms of knowledge for the 21st Century" research agenda at Cambridge University, the workshop will explore why designers and developers of new technologies should be interested in producing objects that users can modify, redeploy or redevelop. This exploration demands an examination of presuppositions that underpin the knowledge practices associated with the various productions of information communication technologies (ICT). A central question is that of diversity: diversity of use, of purpose, and of value(s). Does diversity matter, in the production and use of ICT, and if so, why?

24.04.2008

Opening of workshop with

a) an opening ceremony via videoconference by gkisedtanamoogk (Otter Clan Longhouse, Wamapanoag Federation Manitomp, Maine) and
b) presentations by James Leach (Aberdeen University) and Marilyn Strathern (University of Cambridge).

In her speech, Marilyn Strathern addresses several issues und questions of technology in the social life of people. How does technology come to work in different ways? What are the challenges in the deployment of technology? Is interest (considered as) a (social) counterpart to technology? And she quotes Bruno Latour who states that objects cannot come into existence without social enterprise and action.

After the workshop opening, participants were invited for drinks and food at a reception at the Museum of Archeology and Anthropology (http://maa.cam.ac.uk/). I had an interesting talk with Jim Enote from the Zuni People of Arizona and New Mexico about the opening ceremony via videoconference. He said that for him this is much too personal and intimate and he would never do that. But it was the decision of the presenter from the Wamapanoag Federation, which he has to respect. Jim compared the level of intimacy with inviting an unknown group of people to join the birth of one's child via the internet. This is not what he has in mind by using ICTs.

I also chatted with Robin Boast, the Director of the Museum, Will Tuladhar-Douglas (Aberdeen University), Matt Ratto (University of Toronto), who will join the Faculty of Information Studies at the University of Toronto and who spend some time in Amsterdam working with the New Media Lab, and Jennifer Baird (Canadian Heritage Info Network). The contact with Jennifer Baird could be useful concerning co-operations and funding with/through Canadian Heritage either for Wawatay projects or K-Net/KO related projects.

25.04.2008

On the second day, K-Net information material was handed out to workshop organizers and participants at the workshop venue.

The day starts with an introduction by Robin Boast (Museum of Archeology and Anthropology) about the use and reuse of ethnographic objects. Within several projects ethnographic museums around the world have been starting to include the voices of indigenous peoples to identify and categorize artifacts. Thus, indigenous people get to know where the artifacts and objects are located, which have been taken away from them. On the other hand museums receive first hand and verified information about those objects (cf. Jim Enote presentation).

In the second presentation, Poline Bala of the University of Malaysia, who is also involved in the e-Bario Project (http://www.unimas.my/ebario/index.htm), explores the use of information and communication technologies (ICTs) for indigenous peoples in the Kelabit Highlands of Bormeo. In particular she is discussing the economic, social, and cultural potential of these new technologies in the context of rural areas. The e-Bario project, which aims to create access to and connectivity through ICTs, represents success in the indigenous deployment of ICTs. In addition, ICTs are used to form regional, national, and transnational networks and to create solidarity amongst indigenous and non-indigenous peoples around the world. The use of ICTs includes therefore the important aspects of political empowerment, engagement, and agency.

Jim Enote from the A:shiwi Map Art Project and representative of the Ashiwi Museum and Heritage Center (http://www.ashiwi-museum.org/) introduces a joint project with the Museum of Archeology and Anthropology at Cambridge, which aims to find and describe objects of the Zuni people that are spread across the world. About 70 percent of these objects were wrongly described. Representing thus a false picture of the Zuni people and their culture. The overall aim of this endeavor in next generation museum studies is to bring the objects and artifacts back home to the land of the Zuni. Within this project of redefining Zuni objects and artifacts, Ramesh Srinvasan (UCLA) co-created a database project ("emerging database – emerging diversity") that allows for the semantic mapping of objects by indigenous people themselves. Using an ethnomethodological framework, the project creates new ways of knowledge production. Indigenous peoples are thus regaining authorship and ownership of their objects.

In his presentation David Turnbull (University of Melbourne) rethinks the nature of knowledge by posing interesting questions. How can ontologies meet in the "third space" of cyberspace? How can knowledge create new knowledge? He introduces a software project titled "story weaver" that enables the creation of stories by connecting and recontextualizing story elements and fragments. The software has been created according to the open access initiative and therefore allows the use and reuse of the technology for instance by indigenous peoples to digitize their traditional stories, mapping their land through stories, etc.

Another mapping initiative is presented by Jerome Lewis of the University College London. He co-developed a mapping system that allows for the easy creation of maps by non-literate people, such as hunter-gatherer tribes of the Congolese forests. An iconic interface on a handheld is used by those people to create maps of their hunting grounds without necessarily knowing how to read or write. On the other hand loggers use those maps to avoid the cutting of special trees like the mahogany. The indigenous people can this way monitor the logging

activities in their areas and provide governmental and non-governmental organizations with relevant information. Thus, the mapping system contributes to the long-term monitoring of the logging activities of the region.

In her presentation, Joline Blais (University of Maine) tries to connect concepts of importance to indigenous peoples with new developments in technology. She argues that e.g. kinship should be brought back into technology for a further development of technologies such as web 2.0 (social web), web 3.0 or web 4.0, where everything will be connected with everything in an "internet of things". But before the creation of this technology, and thus constituting the basis of this technological development, there has been web 0.0, the web of life, "the internet of beings".

Matt Jones of the University of Swansea, introduces in his speech a story telling system for rural India (http://www.cs.swan.ac.uk/storybank/index.php). With the help of communication as well as multimedia technologies people are able to create, collect, store, and annotate their stories in a database. Icons are used within this system to tag and categorize story elements. Thus, users in this rural setting are able to generate, access, and control content themselves. ICTs are deployed as community technologies, which imply the sharing and joint usage of these technologies. See also: http://www.bgdd.org/Wiki.jsp.

Juan Salazar (University of Western Sidney) discusses the potential of maps as communication tools for social change, in particular in an indigenous context. He uses Linda Tuvali Smith's concepts of decolonizing methodologies as theoretical and empirical framework to re-apply digital maps as media for cultural development. Having realized several projects in this area, Salazar reminds us that "new media" always need reference to "old media".

A similar approach has Michael Christie (Charles Darwin University) and Helen Verran (University of Melbourne) with their ontological database for Australian Aboriginal Peoples. Within their project they try to hold people and places together through technology by providing indigenous people with the possibility to collect, organize, and categorize traditional knowledge about specific places and areas of their land. Through a "bottom-up" approach of technology usage, the database should be controlled and maintained mainly by the indigenous people themselves.

Dawn Nafus of Intel Research illustrates in her talk the importance of the open source development and movement also for the commercial ICT industry. Within the process of developing open source applications and tools the consumer's agency becomes a crucial aspect, which needs to be understood and valued by the industry. Consumers therefore must be seen as active agents.

James Leach (University of Aberdeen) and Wendy Seltzer (Berkman Centre, Harvard University) introduce a legal template that has been developed to create and support cross-cultural partnerships in respect of usage and ownership of knowledge and technology. With the help of this document traditional indigenous knowledge should be protected and shared according to fair and just rules and regulations.

In her presentation Beth Kolko showcases two research projects on ICT usage in the two Asian countries of Cambodia and Uzbekistan. She reminds us that the regional, cultural, and social context is always very important to understand issues of technology usage and

appliance. Interestingly, Kolko also finds similarities between hackers and their (socio-cultural) activities in developed countries and technology innovators in developing countries.

The next presentation of Hildegard Diemberger and Stephen Hugh-Jones (University of Cambridge) deals with problems book and text digitization projects create in Tibet. In this specific cultural context, books are not only objects. They are like human persons that you can "meet" somewhere or "invite" to your house. In particular religious books and texts are considered embodiments of Buddha. Nevertheless, the digitization of Tibetian texts is important to archive and disseminate knowledge about this culture. It also contributes to the aspired repatriation of texts and books, which are spread across museums all around the world.

Will Tuladhar-Douglas (University of Aberdeen) again takes us to Eastern Asia when he talks about the reading and copying practices of Buddhists texts in Tibet and Japan. Already in 8th century Japan, more than one million copies of a Buddhist text were circulating. Since the majority of people could not read this text, the reproduction and copying of it was the real religious act. Today new ICTs, such as digital praying wheels, are commonly used within the Buddhist community and with the appreciation of the Dalai Lama.

In his presentation, Govindan Parayil (University of Oslo) introduces a project that aims to improve access to ICTs in rural India. In particular women and youth are trained to use and maintain ICTs, such as PCs. Like other speakers before, her reminds us that the local context is of utmost importance in implementing projects and programs in the field that could be subsumed under the term of "community informatics".

Another Asian case study is presented by Merlyna Lim (Arizona State University) in her paper. She illustrates the history of the internet in Indonesia and how it developed over the last years. The internet in an authoritarian nation state, like Indonesia, can decisively contribute to the creation and maintenance of networks of NGOs on a regional, national, and transnational level. Thus, the internet as technology can also contribute to a political change.

The day's last contribution is Tim Ingold's (University of Aberdeen) reflection on the presentations and topics. He argues that despite all the new and wonderful technologies, it is crucial to bring human life back into the focus of research and discussion. In particular in the field of ICTs, human life is too often forgotten. After briefly discussing several essential distinctions, connecting static points vs. moving along like a river (flowing), community building vs. communication, information vs. communication, he concludes that the overall focus of research in the field of ICTs should be on how knowledge is being built. And he thankfully reminds us that there are much more important technologies of daily life than only ICTs: shoes, watch, pen, etc. Ingold also asks us to reflect upon the skills to deploy technologies and how they can result in a, what he calls, "homoganization of skills" (e.g. usage of a computer keyboard). Do new and innovative developments necessarily contradict slow and careful technological developments, which show respect for the past? Is it even possible to be subversive when using ICTs?

The day finally ends with a plenary discussion that highlights the potential of ICTs to support and create creative skills as well as active producers/makers and not only consumers.

26.04.2008

In the first presentation of the day, Matt Ratto discusses the open object initiative by looking at the relationships objects develop between each other. Treating ICTs as "things in contexts", results in the "objectification of technology". By deploying a reductive approach, Ratto suggests to decontextualize the things/objects and to re-situate them in the daily socio-cultural life of people practicing them. More frequent and extended ethnographic research is necessary to support this epistemological approach.

Laura Watts introduces in her paper a project on ICT industries and their relation to landscapes and places. As case study, she took the Orkney Islands, which lie isolated and remote in the North of Scotland. Despite their isolation and decentralization, the Islands are spearheading Britain's ICT development and infrastructure: "the future came early to Orkney". The land and the people are nevertheless crucial factors in the development and deployment of ICTs, and this is of course not always without conflicts, as Watts explains.

Jennifer Baird (Virtual Museums of Canada) tells another interesting story about the active involvement of indigenous peoples in the work of museums and archives. Through social web applications, such as blogs and wikis, indigenous peoples are now able to question the authority of museums in respect of describing and defining objects and artifacts. Thus, authority can be shared between indigenous people and institutions that take care of material objects belonging to the indigenous people. The new technologies also allow for the easy inclusion of people outside of those institutions in creating exhibitions and events, e.g. http://www.innustories.ca/.

How cell phones are used, reused, and applied in Indonesia is discussed by Bart Barendregt of Leiden University. He clearly sees a connection between the social mobility of people and the mobility of communication. In the Indonesian case, the state intended to nationalize mobile phone technology to lift the country into "modernity". This "techno-nationalism" is of course political highly controversial, particularly in a multicultural and multiethnic country like Indonesia. Across Southeast Asia, people have started to "cannibalize" mobile technologies, which are traded in large parts at black markets, by putting parts of different products together, creating thus new and hybrid forms of technologies. Barendregt also reminds us to think about the non-use of such technologies. What happens to people that are not using mobile and digital technologies? Are those the "digital losers"?

In a multimedia presentation, Jim Enote introduces the Zuni Mapping Project (http://www.ashiwi-museum.org/mapart.html) that uses art to map cultural landscapes. For indigenous peoples it always has been a challenge to use the Roman alphabet for describing and defining places within their territories. With the help of these art maps, Zuni people are supported in connecting themselves to special places on their land.

In the following round of discussion, the phenomenon of "living objects" is discussed. Through digital technologies the relations between objects and people, which always exist, can now easily be identified, highlighted, and presented.

Giles Lane (Proboscis) presents a project that aims to create tacit knowledge about issues relevant to a neighborhood or community, such as air pollution. By involving people on the streets, a kind of public authority and agency is created. Within his projects Giles wants to deploy technologies to inspire and develop agency.

In his paper, Greger Peterson (Copenhagen Business School) examines the use of wireless technologies for subversive politics. The case study of the Chaos Computer Club in Berlin shows that non-hierachical social structures also demands non-hierachical technological infrastructures and solutions.

The workshop's last presentation is done by Jon Ippolito (University of Maine) who rethinks the relationship between software as an artistic and as a commercial product. For him control about technology is the crucial aspect. Who controls technology? Who defines and redefines technology? Who configures and reconfigures technological objects and tools? That's why community often resists or rejects technology and technological development.

After Daria Loi (Intel Research) comments on today's presentations and issues, the closing ceremony is being held by gkisedtanamoogk via videoconference.

The workshop brought up a couple of very interesting issues and case studies that were discussed in the stimulating environment of Cambridge and it's University. As Tim Ingold nicely demonstrated, information and communication technologies are not the only technologies relevant for humans today. I also would like to have seen more presentations from indigenous or marginalized people who deploy diverse kinds of technologies.

Like a good workshop intends to do, I was left with quite a couple of questions that could be answered in a possible follow-up event. How to include indigenous peoples in the design and development of digital technologies and applications? Where are the indigenous initiatives to develop and deploy ICTs (besides eBario, the Zuni Mapping Project, and K-Net – www.knet.ca)? Should indigenous knowledge be categorized, systematized, and archived according to "western" agendas and conditions? Do technologies, such as databases, fit the needs of indigenous peoples and their ways of knowledge production and diffusion? Do digital ICTs create new forms of dependencies? Should concepts developed and practiced in the "western" world be applied to developing countries trough new technologies?

APENDIX

Abstract of Workshop

(http://www.crassh.cam.ac.uk/events/71/)

As part of the 'New forms of knowledge for the 21st Century' research agenda at Cambridge University, the workshop will explore why designers and developers of new technologies should be interested in producing objects that users can modify, redeploy or redevelop. This exploration demands an examination of presuppositions that underpin the knowledge practices associated with the various productions of information communication technologies (ICT). A central question is that of diversity: diversity of use, of purpose, and of value(s). Does diversity matter, in the production and use of ICT, and if so, why?

The aims of the workshop are:

- To promote the development of ICT media that ensures diverse and local public constituencies and interests.
- To encourage an approach to ICT development - in education and civic society - that will adopt and enable diversity of use, local modification and creativity.
- To encourage cultural and educational institutions to disseminate their vast bodies of information for the use of diverse communities, with diverse interests and knowledges, in a way that will enable and empower reuse, modification and local significance.

To address these questions, the workshop will explore two overlapping themes: modification of use, and modifications of social processes facilitated by, or inspired by, engagements with ICT. How have new technologies come to be incorporated in existing social practices? In what ways have peoples use of ICTs facilitated greater agency and capacity for political engagement? In making issues public, or through making publics, how has the use of ICT given or amplified the voice of particular communities? How might models of collaborative work, of effective organization or action be facilitated by ICT? Could the resultant models be used as an inspiration for developing appropriate and usable social interventions, or further technological objects? What are the implications that these instances might have for a 'user centered' or 'user owned' ICT agenda?

The workshop aims to make concrete a subversion of the idea of single kind of user, or for that matter designer, and the desire to predict or meet the needs of the end user through products which all too rapidly become obsolete. Furthermore, to question the assumption that obsolescence is inevitable, and that value creation must rely on professional development of new objects rather than public innovations and redesign of existing objects. Thus, our use of 'subversion' does not imply socially undesirable action, but rather means to use, or re-use, in unintentional or unforeseen ways. Our point of departure is that knowledge, and hence knowing, is not singular, nor is it determined from an authoritative center, but is multiple, local and diverse. Furthermore, that knowledges might be thought of as those practices, certainties, stories and understandings that are held and maintained by groups of people. All forms of knowledge, defined as deeply embedded and profound expertise, are, in principle, valuable and deserve a voice. We do not however assume a commensurability of knowledge practices. Rather, through a focus on the politics of production, and the ways in which knowledge practices are modified or transformed, the workshop will explore, share and develop means of expressing, archiving and sharing accounts of knowledges through cultural objects.

This workshop will then bring together in dialogue developers of ICT technologies, indigenous people and community representatives who use and form social networks around ICTs in interesting or subversive ways, and academics who are both users of, developers of and commentators on these processes. While the workshop will encourage those who interrogate the current faith in the digital as the answer to social, educational and archival problems, the intention of this workshop is to offer developers a chance to begin to engage with the perspective of particular, socially innovative end users in order to foster diversity of use.

Workshop Program and Paper Abstracts

24.04.2008

Opening Ceremony (by videoconference): gkisedtanamoogk

Open Objects Initiative Presentation: Dawn Nafus (Intel Research), James Leach (Aberdeen), Matt Ratto (Faculty of Information Studies University of Toronto)

No abstract

Welcoming Address: Prof. Dame Marilyn Strathern (University of Cambridge)

No abstract

25.04.2008

Theme 1: Modifications and extensions of Use

Session 1

Poline Bala (University Malaysia, Sarawak): ***Redeploying Technologies: ICT for Greater Agency and Capacity for Political Engagement in the Kelabit Highlands***

This paper examines why and how the Kelabit in Central Borneo engaged with the electronic Bario (e-Bario) development initiative. It explores how aspects of Kelabit society and history provide the context for implementation of the project and constitute a rationale for present-day attitudes to social change and the future among the Kelabit. This, I suggest, highlights the basis for adoption and application of ICT in the Kelabit Highlands. Conversely, looking at e-Bario, this paper sheds some light of how the Kelabit use ICT to facilitate greater agency and capacity for political engagement in a wider economic and political terrain.

Jim Enote (A:shiwi Map Art Project): ***Gathering community around mapping projects***

With local organizational know-how, sensitive inquiry and attention to Zuni visualization, the A:shiwi Map Art project puts mapping in the hands of non-technicians while adding layers of cultural and artistic involvement in the mapping process. Many indigenous communities and their governments including Zuni are creating maps. However, nearly all these maps are being developed as computer-generated maps that will become part of geographic databases. Alternatively, the A:shiwi Map Art Project works towards communicating geography through art, essentially working with Zuni artists and cultural advisors to turn art into action.

David Turnbull (University of Melbourne): ***Distributed, Dialogical and Diverse: Emergent Processes in Biology, Knowledge Production and Creativity***

This paper examines the ways in which the organismal and the narratological meet in cyberspace. Drawing on recent thinking about complex adaptive systems and about narrative and movement in the construction of knowledge, place and space, it considers the possibilities offered by ICT for establishing a creative commons in which differing and incommensurable ontologies can work together and in which new forms of knowledge making can emerge. It looks specifically at examples of indigenous cartographies and emergent mapping, genetic networks and story-weaving, in which the distributional, the dialogical and the diverse are key emergent processes in the creation of new knowledge.

Jerome Lewis (University College London): ***Re-presenting the world - the production of maps by non-literate huntergatherers as a way of communicating their world to outsiders***

This paper describes how Congolese forest hunter-gatherers have found new ways to communicate their priorities to powerful outsiders who normally never consider their interests. Their traditional forest areas and resources have been attributed by central governments to multi-national industrial forestry companies. Designed together with an anthropologist and software engineer, local forest peoples developed icon-driven software that enables them to use a palm-top computer attached to a GPS to map their forest use and key resources. This new technology is used intuitively by these non-literate people to produce maps that have become a new language with which they have established a dialogue with people who normally ignore their interests. Using maps as the means of communication, their values, needs and concerns are suddenly being treated equally to the objectives and needs of these hugely powerful and highly educated professional managers and bureaucrats. The concept has now been redeployed to monitor illegal logging of key community resources among other groups of hunter-gatherers in Cameroon. These communities' are having vital tree resources raided by timber pirates with protection form local officials. The maps communities produce are being sent by satellite to a web-site so that a series of alliances with powerful groups in the capital can act to pressure the authorities responsible for enforcing forestry law to work more efficiently.

Session 2

Joline Blais (University of Maine): ***Request For Ceremony***

RFC (Request For Ceremony) www.cordova.asap.um.maine.edu/~blaisj/rfc is a call for individuals to re-connect to the land around them by inventing ceremonies to accompany moments from their daily lives. In a deliberate echo of the 'Requests for Comments' that generated the protocols now governing today's Internet, RFC takes the form of an online community repository. In keeping with the project's focus on the earthly rather than the ethereal, Still Water's repository includes categories such as Home and Healing rather than Telnet and TCP. Contributions to RFC to date include a ceremony devised by gradeschool kids for healing pruned trees, a birthday walk conducted by a Montessori teacher, and a tattoo ritual by a college student intent on warding off stereotypical body images. To expose relationships among these diverse ceremonies, RFC deploys a tag cloud based on ThoughtMesh tagging software. Intended to explore the ways indigenous hands might twist digital tools, RFC aims to connect the World Wide Web with the Web of Life. In doing so, RFC reminds us that the roots of 'protocol - the diplomatic rituals that reinforce alliances among different sovereigns - lie in older ceremonial forms aimed at promoting the kinship of

all beings. RFC is produced as part of Still Water's ongoing LongGreenHouse www.longgreenhouse.wordpress.com initiative, devoted to fostering ties between sustainable and indigenous cultures.

Matthew Jones (Future Interaction Technology Lab, Swansea University): ***Narrowcast Yourself - User Generated Content and a Rural Indian Village***

The StoryBank project is examining technologies and practices to allow digitally impoverished communities to take part in the user-generated content revolution. The approach involves combining mobile phones to create audio-visual stories and a touch screen display situated in a community meeting place. In the talk we'll consider how our experiences of working with a rural Indian village community influenced design processes, principles and prototypes. The work highlights the value of community-centred design practices and prototypes in such developing-world contexts.

Juan Francisco Salazar (University of Western Sydney): ***Maps as media for social change***

The paper theorizes recent developments in participatory community mapping as both a form of social and cultural development in its own right, and a form of new media. The paper argues that mapping may be considered as poetic media practices through which Indigenous and community organizations fight back to obtain legal recognition of ancestral territories and access to environmental and cultural resources. Furthermore, the paper speculates with the idea that mapping is an emerging form of narrating place and identity, with similarities and differences to other forms of audiovisual media. Like other media forms (radio, video, Internet) maps are instruments of visual communication where complex issues of visualization and representation are at stake. In many cases, maps can play an important role as instruments of resistance and can be regarded as a novel form of media practice aimed at fostering social change. The ways through which radio and video have allowed Indigenous groups to speak and shoot back to mainstream media have been well documented. Consequently, the paper discusses new mapping for change practices that can be thought of in terms of strategies of 'mapping back' to national states and large transnational corporations.

Michael Christie (Charles Darwin University) and Helen Verran (University of Melbourne): ***Indigenous Knowledge and Resource Management in Northern Australia: Non-coherence as a Virtue***

Ours is a story of an Australian Research Council funded project involving Aboriginal knowledge communities, resource management, and digital technologies. We argue that in this work it is a virtue to promote non-coherence, both epistemic and ontic. In our presentation we will use our project website www.cdu.edu.au/centres/ik/ to show how non-coherence can work in supporting Aboriginal methodologies while also interrupting and resisting the (Western) epistemological and ontological values native to computers and other digital technologies. The following article details one of our case studies and can be considered as preliminary reading for our presentation. Helen Verran and Michael Christie, "Using/Designing Digital technologies of representation in Aboriginal Australian Knowledge practices" Human Technology, Vol 3(2), May 2007, 214-227. www.humantechnology.jyu.fi/current/.

Session 3

Keynote

Dawn Nafus (Intel Research): ***Design, Sustainability and Industry***

No abstract

James Leach (University of Aberdeen) and Wendy Seltzer (Berkman Centre, Harvard University): ***Cross-Cultural Partnership Agreement Template***

The cross-cultural partnership template is designed to help potential collaborators to reach understanding and agreement on the terms of their collaboration. In many contexts people look to the law to establish or enforce a 'safe space' in which collaborative relationships may flourish. Good intention is more fundamental than law or codes of conduct. Nonetheless, legal agreements and faith in the law can facilitate the establishment of relationships where trust is yet to be established. This presentation will showcase a template for agreement which draws upon the law: the result of long-term consideration of issues around collaboration in different situations and arenas. The template draws specifically and intentionally upon understandings abstracted from established social practices and from licenses developed for digital creations. Copyleft (an example of a license for digital creations) has built its alternative upon the scaffolding of copyright law to achieve goals outside of that law's usual bounds. For the exchange of knowledge and creative partnerships (including between indigenous peoples, corporations and institutions, different disciplinary actors, etc.) we draw upon frameworks from the area of the law pertaining to partnership. As in business dealings, choosing the partnership form brings with it default terms of fairness between partners: duties of loyalty, of care, of disclosure, of good faith and fair dealing. We seek to import those ethics and their underlying law to relationships broader than business, giving legal force to terms of mutual respect and mutually beneficial interchange. Although the Gnu GPL and Creative Commons licenses served as models, this template agreement is much more skeletal in form. That is because the core of the partnership relationship is parties jointly articulating their intentions and goals. The process of specifying terms in this agreement can be an important part of building the shared understanding that will assist the relationship to achieve mutually agreeable ends. Experience points to the significance of considering and accommodating the expectations, interests, and location of parties to a collaboration as an ongoing aspect of the relationship itself.

Beth Kolko (Harvard Law School): ***ICT in Central Asia***

No abstract.

Hildegard Diemberger and Stephen Hugh-Jones (University of Cambridge): ***Tibetan and Mongolian Ancient Scriptures in a Digital Age***

Tibetan and Mongolian texts are being rediscovered, catalogued and scanned in libraries, museums and monasteries around the world. Taking place in different social and cultural contexts, these activities aim to explore new forms of archiving and retrieval, to improve access, and to reconstitute collections, volumes and texts that have been broken up and dispersed; they also form part of the revival of Tibetan Buddhism and the preservation of cultural heritage, often after political disruption and religious persecution. New digital technologies, by facilitating the reproduction and distribution of texts, have had an enormous impact in this process with significant cognitive, cultural and political consequences. This paper will present the recently completed Tibetan-Mongolian Rare Books and Manuscripts Project and other projects funded by the AHRC and the British Library, hosted by the Mongolia and Inner Asia Studies Unit at the University of Cambridge. The aim

of the initial project was to enhance the preservation, availability and understanding of some 2,500 Tibetan and Mongolian books and manuscripts held in British libraries including the entire Younghusband collection, some 1,500 volumes gathered by the British scholar-soldier Francis Younghusband during the 1903 invasion of Tibet. This was soon followed by spin-off projects that linked up several similar enterprises in Tibet, Mongolia and Bhutan and enhanced co-operation with projects in the UK. With the creation of large interconnected databases, the accessibility of texts has acquired an unprecedented dimension. However, in this paper we will also raise some of the dilemmas of digitisation as a transnational medium for archiving and dissemination.

Will Tuladhar-Douglas (University of Aberdeen): ***Technologies are busting with implicit intentions: the cases of writing***

Technology is not merely, or even mostly, about making new things. Rather, it should be understood as a bundle of attitudes that come to cluster around a historically contingent engineered innovation so as to create a self-perpetuating social form. After considering the obvious example of the car, I will consider 'literacy' in depth. This is usually thought to be one technology, but I will show that in fact there are numerous literacies that emerge from the enmeshing of prior attitudes – often religious – and the innovation of writing. In the spirit of the event, I will begin with one well-defined example, the ritual use of Buddhist sacred texts in the Himalayas. Newars construct mandalas from their handwritten Sanskrit manuscripts to the present day. They recite these manuscripts in a dismembered way that viscerally disgusts their Shaiva competitors. Tibetans, armed with a vast array of translations and original works in Tibetan, took up block printing soon after its invention and made it the cornerstone of a rich ritual practice including prayer wheels from the tiny to the huge, printing on water, and other deliberately short-lived acts of writing. Interestingly, the two communities were aware of each other's writing practices and technologies; but while the Newars used printing technology to make coins they resisted print until about 1900, and still strongly privilege the handwritten over the printed. I will then apply lessons from the Himalayan case to cyberspace – the proliferation of ritualized forms of writing such as leetspeak, geek codes and Perl stanzas – and inquire as to their social embedding and effects.

Govindan Parayil (University of Oslo): ***The Capabilities to Bridge the Digital Divide: The Missing Link in Connecting Rural India***

India is shining for those connected to its extraordinarily successful ICT industries clustered in a few urban centres, while the vast majority of Indians living in more than 600,000 villages remain poor and unconnected to the ‘information economy’. While large numbers of Internet kiosks have been set up during the past five years in many rural areas through various publicprivate initiatives, these projects have hardly made a dent in bridging the digital divide. In the general policy consensus, the digital divide is more often seen as a mere technological access problem - a problem of poor telecom infrastructure, Internet connectivity, low computer availability, and so on. We argue that this is a rather limited view of the digital divide discourse. Access to ICTs and access to the information that ICTs provide are necessary to bridge the digital divide, but they are not sufficient. Combining empirical evidence, gathered through field surveys conducted in two rural locations in the Indian states of Andhra Pradesh and Kerala, with Amartya Sen's concepts of agency and capabilities, we argue that more crucial than access are the capabilities - on the part of the individuals and society at large - to use ICTs and to convert the information that ICTs provide into useful knowledge. And the digital divide is part of a larger developmental problem in which vast sections of the world's population are deprived of these capabilities; these capabilities can

only be created through large-scale complementary interventions in social development measures.

Merlyna Lim (Arizona State University): ***The Internet and Civil Society Activism in Indonesia***

A decade after its emergence as a popular global medium, the Internet is now integral to socio-political realms of society. If the Internet has been embraced by politicians and civil society entities, does it succeed in fulfilling the visions of its early 90s boosters? In other words, does the Internet form a new public sphere or does it merely perpetuate the existing conditions? This presentation does not attempt to find a definitive answer as to whether or not the Internet promotes democracy or if it is a new public sphere. Using some prominent examples from the Indonesia, it explores on the dynamics and complexities of cyber civic spheres. This presentation argues that the Internet is a convivial milieu in which various civic uses are thriving and new tools for social criticism and commentary are emerging. It is shown by comparing online efforts to promote deliberative democracy and democratic mobilization to understand how civil societies are using the Internet to advance democracy. And second, looking at blogging and remix, new types of civic participation classifiable neither as mobilization nor as deliberation. This presentation demonstrates that the most vibrant political activities in cyberspace emerge in overlapped domain of politics and culture, simultaneously among multiple layers of social networks, between multiple networks of individuals, and between individuals and collectives, creating spheres of civic networks.

Tim Ingold (University of Aberdeen): ***Reflections on the day***

26.04.2008

Panel 1 Exploration: Decentring Design

Matt Ratto (University of Toronto): ***Critical thinking and critical making: conceptualizing material engagement and knowledge***

This paper puts two seemingly contradictory concepts of knowledge and objectification in dialogue, comparing the problems described by Geoffrey Crossick as the 'widgetization' of knowledge to Star and Griesemer's concept of 'boundary object'. While both focus on how knowledge relates to material artifacts, the former sees this relationship as potentially problematic, whereas the latter conceptualizes material objectification as resulting in new possibilities for exchange and communication. I use these two positions to describe a methodological starting point for understanding the various relationships between materiality and knowledge, starting from the idea that material engagement affords at least three related forms of knowledge practice; transactive, performative, and enactive. Using examples drawn from a study of design student projects (carried out at the Umea Institute of Design from 12/2007-2/2008,) I explore the ways material affordances and practices of 'making' encourage and allow transactions between and across institutional roles and boundaries, create possibilities for community performances, and provide resources for individual enacted development. I'll end by briefly describing how a model of knowledge that encompasses these three dimensions of materiality can help us better understand how the creation of material artifacts provide resources for individuals, communities, and institutions to think through complex issues, reproduce cultural relations, and develop and innovate networks and institutions - how, in other words, critical thinking and critical making relate to one another.

Laura Watts (Lancaster University): ***Liminal Futures: Landscapes of Innovation in the High-Tech Industry***

The future of access to information and telecommunications is often talked about as anywhere and everywhere, as pervasive and ambient, ubiquitous and always on. Yet the high-tech industry is not everywhere. Its marketing headquarters and Research & Development sites are located in certain places and not others: Silicon Valley, the Thames Valley, Silicon Fen, historic proximity to the defence industry, and within easy reach of global transport hubs such as Heathrow. The landscapes of high-tech industry, the everyday places where the future gets made in design studios and in business strategy meetings, are therefore very particular. The future is made in everyday practices and places, from PowerPoint presentations to notes made whilst on a train. The future is situated in practices and places; it's always local to the landscapes of its rehearsal and ongoing production. Future-making is entangled in landscapes. For example, the future of anywhere and everywhere telecommunications is made in landscapes that do not resist telecoms infrastructure, where radio signals propagate easily, where the proliferation of ICTs are at their densest, and where a future of pervasive information access seems an unimaginative, obvious possibility. But what of other landscapes? What of landscapes of mountain and sea, which resist the propagation of radio signals and optical fibre? What futures might be imagined in places where anywhere and everywhere do not hold for television or telecoms, but where local specificity and mutability are crucial? Different landscapes might participate in the production of different futures. Set in contrast to the mobile telecoms industry near London, this paper will explore the generative potential of Orkney, an island archipelago off the north coast of Scotland, as a site for future-making in the high-tech industry. Not only does its topography resist a future of ubiquitous access, but its temporality is also radically different to those at the centre of the industry. For instance, high-tech companies on Orkney work within, not a dense proliferation of mobile phone masts, but a dense proliferation of five thousand year-old prehistoric monuments, from stone circles to chambered tombs; their everyday experience includes these enduring technologies. This is not about an ethnography of users, but an ethnography of high-tech designers and managers and their creation of user futures. It concerns future-making practices and processes inside industry, and how they might be done differently in different places. Rather than remote landscapes being at the edge of the high-tech industry, this paper proposes that such landscapes can participate at the centre of future-making. Through dialogues between what is thought of as the periphery and the hub, between universal futures and liminal futures, perhaps more innovative and more locally specific high-tech futures might be imagined and made possible.

Jennifer Baird (Virtual Museums of Canada): ***From 'Ask the Authority' to 'Question the Authority' to 'Share the Authority'?***

The re-use of cultural content for multiple purposes has been a mainstay of the work of the Canadian Heritage Information Network (CHIN, www.chin.gc.ca), founded in 1972. CHIN, an agency of the federal Department of Canadian Heritage, works with museums and heritage organizations as a centre of excellence that provides a visible face to Canada's heritage through the world of networked information. Its mission is to promote the development, the presentation and preservation of Canada's digital heritage content for current and future generations of Canadians. In its initial decades, CHIN housed content contributed by Canadian museums, and acted as a link between site visitors and the content: site visitors sent their queries via e-mail to CHIN, and CHIN or a museum, as 'authority', answered the questions. Social media have changed everything, and as the authority of central institutions is

questioned, site visitors now have the means to create and share their own knowledge bases, drawing on the riches of museums and their specialists, and on each other. CHIN and the Canadian museum community have developed several initiatives that allow users to engage in heritage content and with each other through a single point of access to content housed in disparate museums. With social media and other emerging technologies, these initiatives are now realizing their potential and allowing the re-use of this authoritative content in unexpected ways. Of particular relevance to this conference are three recent projects, each of which begins with content from museums and heritage organizations: 1. Artefacts Canada, on the CHIN site, the freely available online inventory of Canadian museum collections, consisting of 3.5 million object records and approximately 630,000 images from more than 340 museums and heritage organizations. Artefacts Canada is being redesigned and will include fields to document and share intangible cultural heritage and allow users to share their knowledge and stories with each other. 2. Tipatshimuna: Innu stories from the land (www.innustories.ca) is a website developed in partnership with Innu communities in Newfoundland & Labrador and Quebec (Canada), museums, and government agencies. Launched in 2005, the site's architecture was designed to allow the integration of museum collections within and outside Canada, and this year welcomes the first international partner. Beginning as an educational website, it has the means to become a portal to Innu heritage. 3. Teachers' Centre in the Virtual Museum of Canada (www.virtualmuseum.ca). Content from both Artefacts Canada and the Tipatshimuna website forms the basis for several learning resources used by teachers to create lesson plans and by students to undertake hands-on learning about Innu cultural heritage. Tools include moderated classroom wikis and blogs. The Canadian Heritage Information Network has been a partner with many Aboriginal communities across Canada, collaborating on more than twenty virtual exhibitions in the Virtual Museum of Canada that document, promote, share, and present the riches of Canada's First Nations, Métis, and Inuit.

John Bowers (Goldsmiths, University of London): ***Making it up: threshold devices in the curious home, the recipe station in the farmers market, and the music of the 4093 nand gate***

This talk will interrogate several of the conference's concerns through three case studies of recent design work. In these cases, briefly presented here, the open-endedness of design in the face of public appropriation, interpretative variability, and motivated (mis-)use has been an anticipated feature of the designers' work. That is, rather than hope for a fixed set of possibilities for use to be scripted in artefacts or inculcated in the practices of users, various strategies have been worked with to create things which are variable in their significance and admit of multiple trajectories by which they can be encountered and made use of. The talk will describe the practices of the Interaction Research Studio at Goldsmiths London and how their aim to design for 'interpretative appropriation' has been played out in a number of projects under the rubric of The Curious Home. The Interaction Design Centre at the University of Limerick in Ireland deployed a Recipe Station in the hurly-burly of Limerick's farmers market to engage with the local practices of stall holders and customers and a sense of the particular locality and identity of the market. Music makers who engage in practices of 'hardware hacking' and 'circuit bending' will be discussed with a particular focus on the case of the (mis-)appropriation for musical mahem of a logic chip dating from 1968. Each case has been marked by relations emerging between designer and user which fall outwith many models in the social sciences of public engagement, in some cases to the point of making engagement itself an 'outcome', or even an aesthetic, alongside any fashioned artefact. The design forms explored have characteristic features too, making the whole question of

housing/de-housing/re-housing problematic, and in some cases questioning whether a protective barrier between user and machinery is appropriate for these intendedly new configurations. The cases have a notable openness to multiple technological idioms (eg digital ICT is not the point through which all design must pass). However, the talk will close with a cautionary note. It is tempting to celebrate such cases as having radical weight as if reconfiguring user-designer identities is a politically progressive thing to do.

Bart Barendregt (Leiden University): ***Mobile modernities in contemporary Indonesia***

In Indonesian society modernity is increasingly defined in terms of mobility, including social mobility but also the use of mobile media. Many are puzzled by the technology behind cell phones and have been reporting of phones haunted by ghosts. Indonesian mobile modernity has produced its own forms of resistance, ranging from its association with terrorism and political subversion, to other moral anxieties along the seamy side of the information society. The ongoing project the mobile phone is has as the same time led some Muslim groups to question how cellular technology can be 'Islamized'. We therefore need to scrutinize the often powerful discourse surrounding the mobile phone's alleged empowering qualities and the possibilities promised by the industry, partly by linking it to the wider context into which the phone is at present incorporated in Indonesian society, and partly by looking at the mobile's introduction to some of the margins of Indonesian society. If it comes to mobile communication, the country promises to be one of the fastest growth-markets, and yet Indonesian society seems to offer different stories, highlighting strategies used by those hitherto excluded from mobile modernity as to catch up with the information age. Nowadays, in Indonesia even supposedly vulnerable groups such as Java's urban poor, overseas workers and often-illiterate peasants do have access to new mobile media, hoping to participate in what many view as a mobile modernity. The next step in the cellular boom is the long awaited switch to a new technology, broadband CDMA, making possible games, entertainment and mobile Internet. At the same time, it is not these latest technologies or models that should be held responsible for the present growth of the mobile market in Indonesian society, but rather the participation of hitherto digitally less-well-off groups; market women, pedicab drivers but also school children and the older generation. Such leapfrogging is in Indonesia made possible by inexpensive CDMA packages, shops selling phones through intricate credit deals, but more importantly by the vast supply of a black and semi-legal market selling cheap second hand phones. Other strategies include those of cell phone hackers, and crash courses for so-called 'cellular doctors' that teach how to 'cannibalize' phones by using components of older and no longer used mobiles; one phone literally eats the other. These and other alternatives contribute to the trickling down of mobile technology to the lower strata of society. Focussing on the challenges these groups face, provides us with different, little studied interpretations of a much hyped mobile modernity.

Giles Lane (Proboscis): ***Public Authoring, Scavenging and Agency***

Giles Lane will give an overview of some of Proboscis' projects, tools and techniques exploring the use of emerging and traditional technologies by grassroots communities to 'author' their own ecologies of knowledge, tradition, information and experience.

Gregers Petersen (Copenhagen Business School): ***Wireless technology, subversive politics***

Making the assumption that people seem to find their own uses for new objects and ideas and assuming the existence of a relationship between technology and form of social organization

twists ethnographic inquiry into new (or old) directions. This presentation will move and wind its way into, and through, the lines that weave together wireless technology and subversive politics. The setting is Berlin, Germany, in the present. The subject is the subversion of wireless network devices, the subsequent reality of a new wireless networking paradigm, and creation of free information infrastructure by a social structure know as Freifunk. Freifunk came into being from a background of political/technical (h)activism, squatters movements, and the re-merging of the two half's of Berlin/Germany. During the 90's, Berlin was a focal point of infrastructure development, and nothing was too new or too expensive. Then the big year 2k bubble blew. This left large geographical areas of the city with extensive internet-infrastructure on the ground, but no one to operate them, and hence no one to offer broadbandconnections to a general consumer. People first tried to be heard, to voice their needs, then they simply turned their backs and found their own solution. The result has become an autonomous mesh-networking-cloud which now covers extensive parts of the city, offering free internet access and services to everyone who connects (with the right protocol). Similar meshclouds are spreading across Germany and Europe and they are racing around the globe on a quest which constantly creates new budding nodes, from Asia to Africa and Latin America to the Pacific.

Jon Ippolito (University of Maine): ***Whose Tool Is This Anyway? Art and Creative Misuse***

Still Water co-director Jon Ippolito takes a look at emblematic cases of the transition from subversion through conversion to development in connections between art and industry in the last fifty years. Subversion has been a common strategy of art in emerging media, dating back arguably to the Renaissance. Examples of the artistic misuse of existing technologies from our period are plentiful, as made famous by Nam June Paik's rewired electronics from the 1960s. Examples of conversion are harder to come by: few companies chose to release consumer products based on Paik's disgorged televisions, although features of some prominent 21st-century applications such as Adobe Illustrator and Google Earth do reflect the clear influence of artists such as Adrian Ward and Art+Com from the 1990s. If we look instead at the proactive adoption of an artistic approach (development) rather than the retrospective adoption of an artistic feature (conversion), the salient example is today's so-called "Web 2.0" phenomenon. Web 2.0 hallmarks such as user participation (YouTube, Flickr, blogs), rich user experiences (AJaX, Google Maps), and radical trust (Wikipedia) have precedents in early Internet artworks such as Refresh, Web Stalker, and DeskSwap. The Pool www.pool.newmedia.umaine.edu is an example of an artist-designed application that incorporated all three strategies years before the term "Web 2.0" existed. History shows that new media art's promotion and appropriation by established hierarchies can either reinforce or destabilize the status quo, depending on the speed, breadth, and audience for this conversion.

Summary of the Workshop and Comment

Daria Loi (Intel Research)

Roundtable discussion – Open technologies and new possibilities for development?

John Norman (Director, Centre for Applied Research in Educational Technologies, Cambridge), Alan Blackwell (Computer Lab, Cambridge), Wendy Selzer

Closing Ceremony (by videoconference): gkisedtanamoogk

Links:
http://www.crassh.cam.ac.uk/events/71/
http://vectors.usc.edu/thoughtmesh/publish/12.php