The FutureEverything Manual

Contents


Prime Numer

Introduction

The FutureEverything Manual introduces the FutureEverything digital innovation labs and methods, the themes of the 2011 edition of the FutureEverything Festival, and includes a number of essays.

The goals of FutureEverything (founded in 1995), are to make possible inspirational art and innovation, to support more active, empowered communities, and to create a more vibrant and connected creative ecology.

FutureEverything presents a global festival of art, music and ideas, and an award celebrating the creative imagination that will shape our future. It also runs year-round digital innovation labs on themes such as open data, urban interface, remote collaboration and environmental mass observation.

FutureEverything works closely with city partners in Greater Manchester and with Imagination Lancaster and Lancaster Institute for the Contemporary Arts (LICA) at Lancaster University. FutureEverything 2011 is the focal festival in 2011 of the ECAS festivals network, supported by the EU Culture Programme (2007-2013).

The 2011 edition of the FutureEverything Festival is dedicated to Howard Raynor.

Drew Hemment
Editor and Creative Director

Media Art Redux

Drew Hemment

There is a rich tradition of profound artistic enquiry engaging in new media technologies going back to the 1960s. Artists are coding, sculpting, visualising, sounding out new kinds of art object, and new possibilities for participation, new ways of seeing, new ways of being. We can reach out and play with every image and word ever created, every idea ever thought of, it is all there, right in front of us. We can endlessly recombine and reconfigure, we can travel through time, instantaneously connect with people and places at all points on the globe.

Times of change and transformation often inspire profound art. Artists have charted and led the upheavals in digital culture, and the radical social change that follows in its wake. An instinct within many media artists is not to think only of what digital tools can offer, but to want to shape and influence the way digital technologies develop, and how they impact on, or are shaped by society.

As the digital space moves from novelty into everyday, it is becoming the site of more sustained, original artistic engagement than ever before. The digital is today so pervasive it has little use as an organising term, it is now one among many spaces that artists can engage in or draw upon.

Today the critical vision and competency embodied in the new media arts field have ever greater relevance, as its ways of working, and vocabulary resonate so much more widely. This creates an opportunity to communicate the values that are so vital and cherished, and to deepen engagement in shared interests (eg. peer to peer, collaborative culture).

Photo: American female barefoot free-falling skydiver, in Kevin Macdonald's Life In A Day, produced by Scott Free UK.

The digital space has contributed to new approaches to being an artist, and to engaging with people-formerly-known-as-audiences. New audiences include active participants and also lurkers, the 'invisible audience' whose gravitational pull is shaping online life. Arts policy often focuses on the benefits for audience development and accessibility. This is important, but our imagination should not end there.

Now is a time to appreciate how the digital plays out within art, and to promote the important political and social space that is at stake. We need spaces where artists have free rein, and you can rub technology against the grain.

The FutureEverything Award

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The FutureEverything Award celebrates the creative imagination that will shape our future

~

Drew Hemment, Director FutureEverything

The FutureEverything Award recognises outstanding achievement for innovation in art, society & technology. It celebrates creative projects in any medium that offer a new and unique way to experience or see the world and help to bring the future into the present. The winner receives a £10,000 cash prize and the Future Everything Trophy.

From an initial longlist, the international jury shortlisted three projects, which then went forward to an open vote of the FutureEverything Community, our worldwide community of past festival participants, speakers and delegates. The winner will be announced at a Gala Ceremony during the FutureEverything Festival in May.

2011 International Jury:
Bruce Sterling, Yukiko Shikata, Jeremy Myerson and Colin Fallows (Chair).

2011 International Advisory Group:
Régine Debatty, Anthony Townsend, Jo Kazuhiro, Dooeun Choi, Marcos García, Gavin Artz, Gisela Domschke, Karen Gaskill.

The Awarding Bodies are:
FutureEverything & ImaginationLancaster.

Winner:
Macon Money
Area/Code

From the Brixton Pound to Local Exchange Trading Systems there has been a recent surge of interest in hyper-local currencies which enable communities to keep business flowing into shops in their area. With the Transition Towns movement, much of the discussion has focused on the benefits of community cohesion, but artistic engagement has often been reserved for the design of bills, many celebrating unsung local heroes.

However, with its people-to-people interactions, local currency is an area ripe for artistic investigation, and with Macon Money, Area Code provide an invigorating example of progress through gamification.

Games engage people with issues, ideas and other people, and that engagement shifts the ways in which the world is perceived. Macon Money is a city-wide social game designed to address the issue of socio-economic segregation and to bring together residents in the city of Macon, GA, using a real-world local currency.

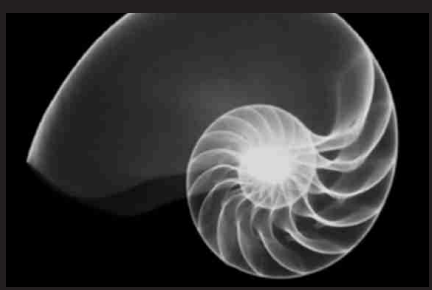
Tens of thousands of US dollars' worth of Macon Money has been printed up and to earn this currency players cash in "bonds" that have been distributed to residents of Macon. The catch is that each player gets just half a bond and to turn it in must find a person holding a matching half.

Runners-Up:
DIYcity
John Geraci

DIYcity is a way for tech innovators to apply their web know-how to making cities work better. Developed by John Geraci, the website took off and found a worldwide audience of programmers, entrepreneurs, urban planners and city workers, all collectively exploring how they can help rethink and reinvent their cities.

Interior Design
Robin Fox

Interior Design: Music for the Bionic Ear is a pioneering project in music composition involving the creation of new musical works tailored specifically for the current implementation of cochlear implant software and hardware. With implications well beyond the making of music just for implant recipients, the project aims to create concert environments where new music can be appreciated by implant users and hearing people alike.



Innovation Labs

Drew Hemment

FutureEverything runs year-round digital innovation labs, engaging a worldwide community in generating new ideas, social connectivity and practical solutions to innovation problems.

FutureEverything Data Arts (2010-ongoing) engages artists and designers to make data tangible, (see The Data Dimension, pg14). FutureEverything has been commissioned by the Cultural Olympiad to scope out a major data visualisation artwork for the London 2012.

Open Data Cities (2009-ongoing) has driven Greater Manchester's transition to an Open Data Framework. It has informed a new European initiative, and led to the Open Data Manchester community and, in partnership with Trafford Council, the Greater Manchester Datastore, DataGM (pg 28).

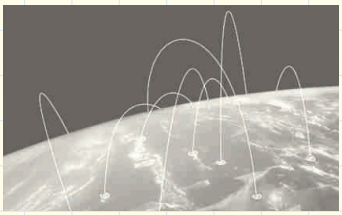
Two innovation projects in the 2011 festival programme include:

OurCity (pg 29), a prototype for mass participation and citizen-led innovation, developed as a part of FutureEverybody (an innovation lab theme), responding to the City Debate 2010 call to arms; "the future must be for everybody".

OurTravel (pg 30), a social media transport app tested at Future Everything, part of FutureMobilities which has explored new approaches to the mobility of people, media and things.

Over the years FutureEverything has run more than 20 innovation labs including:

Globally Connected (2009-10) explored the theme of distant collaboration, telepresence, networked performance, local/global connections, unlimited connectivity and group-to-group connectivity, focused around the GloNet globally networked event in 2010.



Urban Interface - Smart Cities (2009-10) looked at the ways in which cities are being rewired, through a series of urban interventions, debates, and art and design experiments. It has informed policy debates in Greater Manchester, and was featured on the cover of two Guardian Smarter Cities supplements.

Environment 2.0 (2006-9) explored how the internet and locative technologies can transform people's relationship to the environment. Participatory mass observation prototypes were developed with the Met Office, OPAL and Natural History Museum, some since scaled up nationally, and informed a new European initiative.

Social Technologies (2006-8) was an early foray into social media, focused around annual Social Technologies Summits and Social Networking Unplugged (a 2008 festival event) which led to a series of interactive art probes in urban social media.

Mobile Connections (2003-6) was an innovation lab on mobile and locative media that contributed to the emergence of the field of locative arts. It culminated in the first major exhibition and conference on the field in 2004, some of the first publications, the Loca artwork, and the Pervasive and Locative Arts Network (EPSRC).

futureeverything.org/innovation

Data Art

Drew Hemment

Artists have always sought to give form to human experience that is beyond the everyday. In data, they have a rich resource with which to work. Art can make data tangible, it can bring it alive, reveal its hidden beauty, and illustrate the ways it can be exploited and how it can shape our daily lives. Artists are naturally adept at providing insight and fresh perspectives, often making visible the invisible codes by which live our lives.

By reflecting our data back to us in new and surprising ways, collective everyday activities become readable patterns, that can be used to make more informed decisions about what we do. In the coming years, FutureEverything will be commissioning artists and designers to help build an open data future. Artworks and social innovations will use real-time data and illustrate the potential of open, freely available, accessible data. The goal of FutureEverything Data Art is to create the new ways of seeing we will need, in open data environments, to build an open data imaginary, a new conceptual and visual language.

Data Literacy

Drew Hemment

FutureEverything has developed a data literacy programme with the goal of achieving mainstream understanding of data, and issues around data services and the digital society. Inroads have already been made into the unexplored space, described here as the data dimension.

The data dimension is a domain of zeros and ones, of databases and server farms, of APIs, applications and interfaces, of digital economy and digital culture. To navigate the data dimension we should first understand and play with the stuff it is made of, the way it is made, its unique potentials.

Data literacy is required if people are to benefit from the data dimension. To be relevant and interesting, data must to be interpreted in new and exciting ways. We need rights of access, and the understanding and the tools to navigate, play and create in this digital space.

The Smart Cities of the future rely upon an informed public and engaged conversation between citizens, their governments and service providers. Already we are moving through fields of responsive sensors and exuding data at every turn.

Understanding of a data-based and digital society can be communicated through concepts such as the networked city, data visualisation, open data, hyperlocal data and the interpretation of proximity, community use and generation of data, and novel means of navigating the data terrain. Research on technical and social dimensions can offer important insights on issues such as interoperability, trust and accountability.

Digital literacy activity in 2011 includes the FutureEverything conference programme, the meetings, advocacy and hackdays in the Open Data Cities project, and the art programme of the FutureEverything festival, which includes The Data Dimension art exhibition.

Art Programme 2011

Drew Hemment, Kate Taylor

Bringing together artists, designers, technologists and tinkerers, the FutureEverything 2011 Art Programme presents a spectrum of creative activity spanning technology and social ideas.

In the main exhibition, ***The Data Dimension*** (pg 14), art and design responses to the immaterial world of data take in data sculptures, the minutiae of personal statistics, innovations in search and visualisation, new forms of film and music video, and the pioneering work of MIT SENSEable City Lab.

Familiar urban space is re-imagined and re-choreographed for the world premiere of new work ***On Ways To Disappear Without Leaving A Trace*** from award-winning duo Me and The Machine. Audiences are led to a telescope high above the city to observe, one person at a time, a secret cinematic plot unfolding. Urban space is augmented by overlaying real-time street performance with previously filmed footage from that window. Viewed through a video display installed inside the body of the telescope, the familiar urban space becomes the stage for an ambiguous conspiracy, of which the viewer is simultaneously observer and protagonist. Throughout, an enigmatic invisible personage from a 'past present' accompanies you in the room, while additional binaural sound reinvents the immersive soundtrack of the cityscape and the room in which you sit. Reality, fiction, film and everyday life entwine to create a rich atmosphere of mystery and intrigue, a crossing point where things can seemingly be at arms reach yet out of your control. FutureEverything is proud to be unveiling this new work and supporting emergent talent to offer a unique and personal experience at the festival.

Handmade brings together contemporary craft, digital hacking, interactivities and DIY culture, co-hosted by Victoria Baths, one of Manchester's prime heritage locations. It caters to a newly emerging maker community, connecting the culture of traditional skills and materials with modern-day digital production, distribution and interaction techniques.

The UK's only Fab Lab moves to *Handmade* for the day, creating an open access rapid prototyping lab in Victoria Baths. The public is invited to play with digital manufacturing equipment and materials and create something to take away. Makers are invited to stretch their imagination with tools such as laser cutters, etchers, robotic routers and three-dimensional printers that produce digital objects in physical form, bringing us closer to the 'internet of things'. Antony Hall creates an installation continuing his research into physical oscillators to generate sound and visible patterns in a newly commissioned kinetic artwork, created within the space of an empty swimming pool. Artist in residence at Chinese Arts Centre, **Yu-Chen Wang** explores her interest in Victorian technology and all things industrial revolution, with an installation and performance reflecting on the nostalgia of technology. Renowned digital ceramicist Michael Eden delivers a presentation on the relationship between the handmade and the digital. MzTEK and SPACE Studios present their ***DIY PACWOMAN*** workshop for women, covering basic electronic components, micro-controllers and Arduino software, Dundee University presents a workshop creating toys and clothes that allow people to communicate online, while **Manchester Craft & Design** represent the more traditional world of handmade culture. Twenty other makers and crafters present stalls of creative wares.

Festival As Lab (pg 26) transforms the festival into a space where we can experiment and play with future art and ideas. Two new projects have been commissioned by ECAS, a new European festivals network supported by the European Union Culture Programme. ***OurCity*** (pg 29) by Adam Nieman with Lancaster University, FutureEverything and Manchester Communication Academy, is a new way to gather, share and apply intelligence from the citizens of Manchester. ***CHET*** (pg 30) by Intolight is an audiovisual instrument which enables the audience to use their body movements to play with sound and image.

iShed presents a showcase of works emerging from the petri dish of their ***Media Sandbox***. Moksha uses the unique characteristics of scent perception to communicate emotions and ideas and deliver scent-based experiences in public spaces. AlphaSphere is a new electronic musical instrument with a tactile, sensory interface that offers an innovative way of interacting with sound. Mutant Labs integrate the power of the voice and emergent biofeedback sensor technologies like heart rate monitors into video games.

Switch On Switch Off is a participatory hacking workshop by Culturelab using

physical gestures such as a kiss, a handshake, sitting on a chair, putting a cup back on the table, a hug, as switches to create interactivity. *Interfacing With The City* addresses future interactions between people and the urban environment.

Continuing the global and connected theme introduced in 2010, ***All The World's A Screen*** is a new telematic artwork by Paul Sermon, bringing audiences in Manchester and Pobleneu in Barcelona together in a virtual space to create their own interactive generative cinema experience complete with sets, costumes and props. TOTeM return with ***RememberUs*** (pg 19), following the world premiere of *RememberMe* at FutureEverything 2010. A tangible example of the 'internet of things', people donating clothing and other items in Oxfam stores can also leave behind associated memories, by attaching YouTube or Audioboo clips on to the objects which people visiting the stores can browse. Memories left in Oxfam Emporium can be picked up in Oxfam Originals when it is re-associated with another 'thing' that they choose to buy.

A series of artist talks illuminates the ideas behind the artworks. Events continue at Cornerhouse with two stimulating sessions. Bringing the visual arts community and Manchester's thriving digital design sector together for a series of lightning presentations, Show and Tell for Sendai is presented in celebration of the city of Sendai in Japan, to highlight their creative sector and links with Manchester. Here Kimchi and Chips also present Lit Tree, in which a tree has a perpetual conversation with the visitors of a gallery space through video projection, Kinect tracking and volumetric light patterns using leaves as voxels (3D pixels), a Cornerhouse micro-commission for FutureEverything 2011.

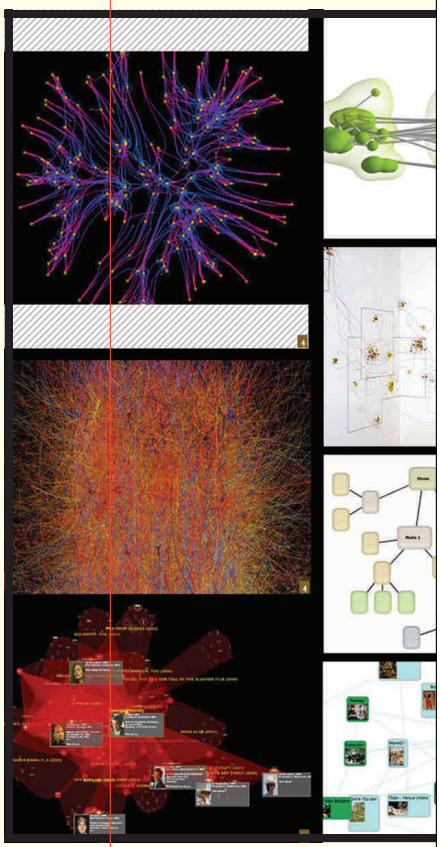
Partner exhibitions and projects include: innovative user-generated exhibition ***Switch Circuit*** at BLANKSPACE, Chinese Arts Centre opening its doors for open house at Yu-Chen Wang's ***Breathe Residency***, Hulme reflecting its own local culture in ***100 Objects of Hulme*** at the Zion Centre, digitalia transformed to microfiche for posterity in David Griffiths' ***Babel Fiche*** and derelict and hidden cityscapes explored in ***Borderlands*** by Rupert Griffiths at CUBE.

The exhibition also features a trio of works from The FutureEverything Award, celebrating the most inspirational art, design and social innovation, bringing the future into the present.

The 2011 art programme takes over three ground floor units of Four Piccadilly Place, and then extends through the city including events at Cornerhouse and the splendour of Victoria Baths.

The Data Dimension

Drew Hemment, Kevin Smith

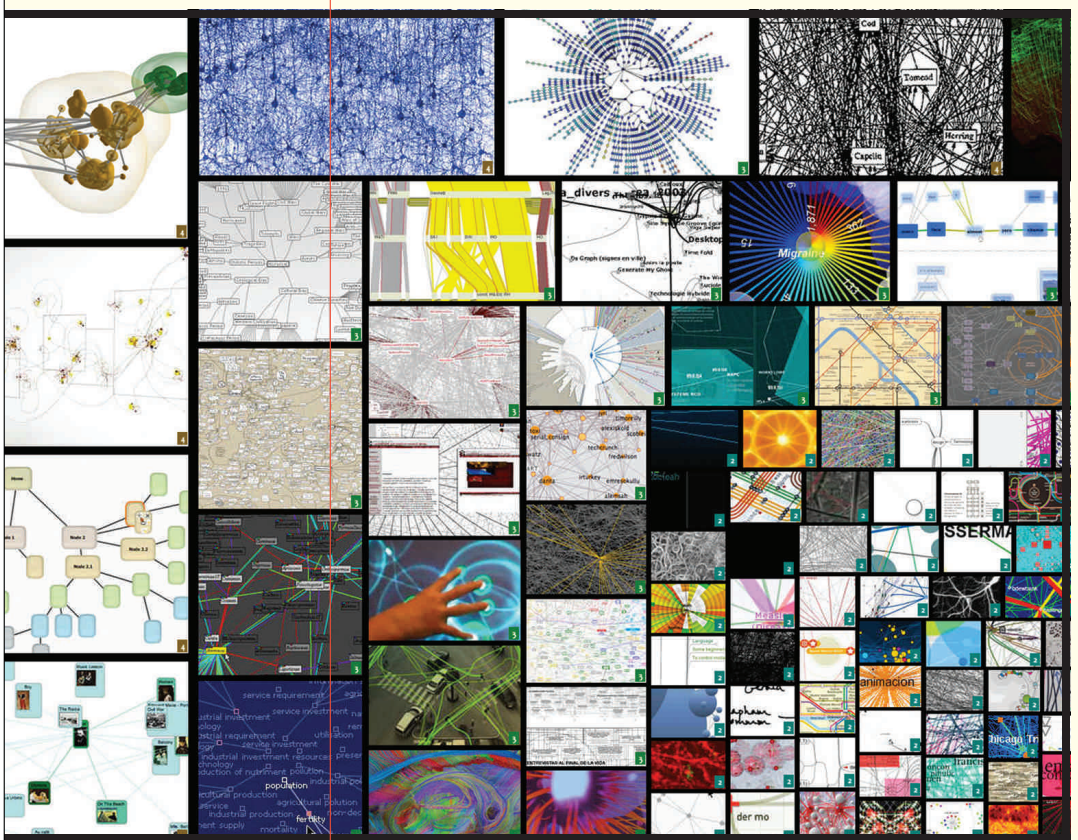


Data is the evidence, the trace of everything that has past, a slice of time which once was, and it is changing our future. Today the world of data is expanding and flowering, not quite before our eyes, but behind the apps and services on which we increasingly rely. It exists in our imaginations, our artworks, and in design prototypes. What we here refer to as the data dimension is shifting the digital landscape just as social media did five years ago. We are now witnessing an explosion in the number and scope of data repositories and data-driven services. People's everyday interactions, when posting updates and images online, or simply moving through the city with a mobile device, leave trails of data that capture the details of daily life. Cities and online services today create vast stores of information, they endlessly collect and archive data on everything imaginable, from the times traffic lights go red to local climate and the names and locations of trees.

The Data Dimension at FutureEverything 2011 illustrates new ways of seeing and how the data dimension can change us. It features an eclectic mix of design and art projects which gesture towards a data-driven culture. The first microscope was designed by Galileo Galilei (1564–1642). The microscope, like the telescope, revealed entirely new worlds at scales impossible for humans to perceive. Today, like their predecessor, scientists, artists, academics and amateurs re-purpose, extend, and invent new technologies to observe and comprehend the things no-one has seen or understood before.

This not only reveals a previously unimagined realm, more than this it constructs a new reality, giving shape and life to a new dimension. The artworks featured in The Data Dimension are examples of the type of experiments taking place. They are spy-glasses to study the microscopic, immaterial and infinitely complex. This is about illuminating a future, and creating a new perspective, on a world which is only beginning to emerge. The Data Dimension presents a selection of these Digital Microscopes; artworks which amplify our ability to understand beyond the range of our senses and nurture new insights into the invisible infrastructures that make up our world. Here designers and artists visualise the invisible layer of complex data that surrounds our daily lives, making data come alive.

Before we can do anything with data, we first need to capture the information. The way we gather the data, and the choice of what data we collect, are our first steps into the data dimension. The devices and applications we daily use automatically capture data on the electronic interactions in our everyday lives. Some people voluntarily record everyday data, in some cases as a performative act, recording their routines and habits. One such data obsessive is **Nicholas Felton**, whose Annual Reports transform the minutiae of his daily interactions into graphic design. Felton exposes traces of emotional resonance in our 'information shadow' to create an 'aura of data'.



Seemingly mundane happenings such as his conversations with friends accumulate over time to reveal startling new dimensions on the everyday. Felton has released an app, Daytum, which enables all of us to similarly become hoarders of the everyday and to discover new dimensions on our own lives. New social realities emerge through capturing and making sense of **everyday data**.

How do we come to know, or see, or experience something which has no physical form? To make sense of it we need to turn it into something we can understand. One way to do this is through **visualisation**. To visualise is to give form to something not yet known as a visual image; to turn it into something we can make sense of with sight. Within the art space a bar environment designed for FutureEverything hosts the world premiere of a commission by **Marcos Lutyens**, an intermedia artist who has exhibited at the Venice Biennale and the Museum of Contemporary Art in Los Angeles. His Absolut FlavourCollider uses a Neurosky EEG headset to project visitor's personal brain wave activity into a spectacular responsive display and interactive sculpture articulating the emotional state of people indulging in the Absolut experience.

Complexity is the consequence of our increased capacity to measure more accurately the world around us. The more we discover, the more complex the world becomes.

reMap from **Bestiario**, is a meta-visualisation; a visualisation of visualisations and as such serves as an excellent introduction to this domain. Curated by Manuel Lima, this is a comprehensive review of visualisation projects that relate to complex systems. Bestiario pushes forward the technical display of world class data visualisations and allows audiences to instinctively search a huge database of visualisations using tags and keywords, allowing navigation using a semantic approach and depicting relations among them.

This brings to life the way it is possible to **search** and navigate the new data domains. Search is a process of crawling through databases or the web, indexing the content, and returning results to user queries. The world of searches is today dominated by Google, who handle thousands of searches across billions of web pages every second. A regular collaborator in FutureEverything, Aaron Koblin now heads the Google Data Arts department. Search is also an issue for the media industries and the BBC. Bill Thompson is part of a team working on the BBC Archive and building a Digital Public Space. Increasingly, we need more innovative ways with which to navigate this data terrain. **BBC Data Art** for example offers a glimpse of the future of television. We are still in search era, in which we are all just looking for things. A trio of projects, Political Atmospherics, NewsTraces and TV Related Content: News 24 suggest that in the future, we will have more systems that will do more for us, in ways that we can't yet comprehend.

Entirely new forms of media object are possible in the data dimension, a future of data objects, real-time material representations, which organically grow from their originating data source. Berg, with Timo Arnall and Dentsu London, document this phenomena in their appropriately titled piece **Making Future Magic**. This is a video sketch of an inventive technique for creating three-dimensional forms in light by moving an iPad through space. This is one of a series of experiments in giving tangible form to '**Immaterials**' (Matt Jones), dimensions in our daily environments which have no physical form, such as data and wifi clouds. The data dimension is immaterial, it affects everything, and yet we cannot reach out and touch it. Its physical reality is in the server farms, vast rooms full of computers hosting the data and applications. We make sense of it through metaphors such as the cloud, the domain of remote services and applications we access from any point in space. By transposing it from the confines of the screen and into the physical world, focus is drawn to the materiality of the data itself.

There is potential for us to do more than simply paint space with data. Art works include Form Follows Data, a **data**

sculpture project in which **Iohanna Pani** presents her quantified self and her domestic encounters in the form of everyday objects such as a cup which physically reflects the volume consumed each day, making tangible the language of personal statistical data. Capturing obscure weather data using very simple data-collecting devices and transforming it into abstract sculptures, **Nathalie Miebach** creates intricate wall pieces that function both as musical scores and weather almanacs. In Food of Art, **Nadeem Haidary** conducts data analytics on still life paintings, analysing 12 masterpieces for their nutritional content, breaking down food values from Frans Snyders' 39,851 calorie feast to Vincent Van Gogh's four meagre onions. Presenting a witty analogue take on digital metrics in physical space, Hit Counter by **Zach Gage** is an interactive piece which narcissistically counts its own visitors and proudly presents this number as the artwork itself.

New forms of narrative and personalisation are also possible. Visitors can expand on their own personal data by interacting with Chris Milk and Aaron Koblin's groundbreaking music video experiment for Arcade Fire, **The Wilderness Downtown**, seeing their childhood streets come alive by submitting postcode data. Search and mass participation strike a deeply cinematic note in a preview of 'the YouTube movie', a Kevin MacDonald-directed feature film **Life In A Day**, edited together via thousands of YouTube clips uploaded in a single day, 24 July 2010. From intimate moments of personal experience, to vast themes of birth and death, an epic self-portrait emerges via mass participation, as editor Joe Walker creates a kaleidoscopic compilation from 4,500 hours of footage in 80,000 submissions from 140 nations.

The city is filled with an invisible landscape of complex networks. We live our lives within an invisible system, blissfully unaware of the intensely designed infrastructure that supports us. Data visualisation can capture this connectivity and suggest new ways to view, understand, and ultimately navigate our city, like never before. Upon viewing Borderline, from **MIT SENSEable City Labs**, we realise that lines on a map are in fact meaningful connections. A multitude of human interactions, real-time life unfolding before you. Borderline redraws the map of Great Britain based on the complexity of billions of human connections, and asks if regional boundaries defined by governments respect the more natural ways that people interact across space. It reveals for instance that the effects of a possible secession of Wales from Great Britain would be twice as disruptive to the human network than those of an equivalent secession of Scotland.

The Data Dimension also imagines a future beyond the computer screen. In the **Media Surfaces** video sketch, Berg present data in physical context. Travellers in a train station are able to interact with a panoply of screens, and smart surfaces reflect our data back to us. Here, we imagine the built environment as interface, in what could be described as a form of data signage. A useful analogy to help explain this idea is to think of the world as a computer, with these signs playing the same role icons or menus do on a computer desktop, indicating objects and their operations; a graphical user interface for interaction with the world. Combine this characteristic with innovation in touch-screen display, which includes 'shape-memory' layers that when activated lend the displayed image physical texture. It is possible to imagine a future where data really is without boundaries and it shapes the physical world around us.

RememberMe

A rolling stone gathers no moss and other consumer conspiracies

CHRIS SPEED

Launched in April 2010, the *talesofthings* site offered a simple but novel approach to recording social histories and a playful critique of tagging culture and the 'Internet of Things'. Our platform allows anybody to attach web content (text, image, video and audio) to an artefact through the generation of a unique QR barcode that the owner is encouraged to stick to their thing. When scanned by somebody else using a smart phone, media is launched and the object can be seen/heard to tell a story about the memories that it is associated with.
Our reasoning was simple, that the existing public use of tags (RFID, traditional barcodes and two dimensional) is based upon a 'read only' relationship. And although the web savvy amongst us can generate a QR code and associate it with web-based media, for many people the scanning of codes is a practice reserved for people working on supermarket checkouts and in passport control booths. *TalesofThings* gives the ability to 'add a tale' to a 'thing', artefacts become 'writeable' and 'open' to further association.

The website began accruing stories that were associated with peoples actual material artefacts. However as the immaterial database grew it became clear that we needed an event that allowed the material artefacts to manifest a social Internet of Things, rather than online repository of stories. *RememberMe* at FutureEverything 2010 was a collaboration with the Oxfam shop charity shop. People who dropped things off were asked to tell a brief story about one of the objects into a microphone: where they acquired it, what memories it brings back and any associated stories. These audio clips were then linked to an RFID tag and QR code and attached to the items as they joined the shop's stock. Visitors to the shop were able to use bespoke RFID readers, or their own smart phone to browse artefacts that were displayed amongst the many thousands of other objects. Labels highlighted the *RememberMe* objects and once triggered, speakers located in the shop replayed the previous owners story, evoking a ghost from the past. Once tagged the objects were in the public domain for purchase by other members of the community, and the project's iPhone and Android apps allowed new owners to access old stories but equally importantly, add their own.

In 2011 we wanted to exploit the projects 'write back' feature and see if we couldn't tip the balance between immaterial and material in favour of the former. In *RememberUs*, the team has set up two shops that act as supernatural portals to the Internet of Things. Visitors to the Oxfam Emporium are invited to 'let go' of memories that are associated with particular things by attaching stories to our memory vessels, moments later in the Oxfam Originals shop just down the street, people will 'pick up' your memory and the memories of others when they are associated with another 'thing' that they choose buy. Leaving the shop with what may be perceived to be a second hand item, shoppers will take with them many, many memories that have been associated with their new shoes, trousers or dress, exploding the assumption that a rolling stone gathers no moss. Keeping each thing open to interpretation may prove to have a critical role in contesting many of the habitual consumer practices that have formerly defined concepts of value, quality and the destiny of artefacts.

Ideas – Conference Themes 2011

Text by conference participants,
edited by Drew Hemment.

As computers become more human, displaying emotions and empathy, and social technologies are integrated into everyday objects and activities, people's experiences and environments are becoming more mediated. The places we live, play and create are increasingly populated by smart products, interactive screens and digital 'things'. Emotional computing looks at how smart objects are being programmed to display human characteristics, personalities, emotions and almost lifelike behaviour. The challenge is to avoid the uncanny valley of human mimicry, and for products to display human traits in engaging ways. This has consequences upon our identities, interactions and how we relate to each other. From fragments of shared online experiences a new kind of existence has emerged – loosely woven networks of actors who exist between the physical and the digital, thriving on information overload. The social web is populated by alter egos: software agents devoid of artificial intelligence but crammed full of empathy. Increasingly robots, strangers, our own attention and social patterns influence the way we discover, consume and curate content online.

~

Toby Barnes, David Bausola, Tom Chatfield, Meg Pickard, Dan Catt

Today, the city is reconfiguring itself around the network in subtle and intriguing ways. Transportation systems, lighting systems, public media hardware like active signage and sound-systems will become objects available for activation, control, and coordination by tools and services that citizens use in their everyday lives. Users of public spaces can configure such tools for specific temporary functions and even begin to 'perform' space together. At the same time, games and play have started to break out of the traditional frame of the video screen, enabling the gamification of urban space. Cities are also spaces of violence, squalor and poverty, it is necessary to explore why cities exist and what makes them thrive or decay. Some people flee the city, and turn to nature to situate and comprehend their experiences of cyberspace, connecting apple trees with wikis and Twitter with zillions of tiny rivers.

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Juha van 't Zelfde, Sue Thomas, James Bridle, Luis Bettencourt, Kars Alfrink

The future of mobility is changing, we need to look beyond the centralised transport of people and goods around the globe. Driver-less cars are not far away, but we cannot wait for flying cars, jet-packs, hover-boards, and teleportation. Intelligent transport systems and traffic shaping can lead to more sustainable options. By making transport data open we have the opportunity to develop services and applications where transportation is a component, whether it be applications that integrate journey details into event listings or analysis based upon other open data sources. Tele-working and slow transport can transform the movement of people, ideas and things. Travel-time can become smarter and more user-controlled. A good transportation system is key to a healthy functioning city. But making transport data open is not without its challenges, the datasets can be huge, in realtime and complex. How do we make transport data available, robust and sustainable and what opportunities will it create?

~

David Hytch, Razia Ahmed, Jonathan Raper, Malcolm Barclay, John Urry, Simon East

Open Data holds much promise for people in many sectors, including local government, journalism and culture. Data is becoming more available and easier to access every day, with open standards being adopted increasingly wider. It is seen as providing space for innovative services, more efficient government and re-enfranchisement of the public. For journalists, a key problem today is how to use the data to tell stories, how to aggregate perspectives and how to get to the kernel of the subject. The future possibilities for journalism include algorithm-derived investigations using linked data. Dramatic changes will follow the role of publishers and what skills modern journalists need. For social activists and local government the challenge is to build the skills and understanding needed to drive a new economy based on innovation and a more equitable society. The cultural sector can also benefit from Open Data, by adding layers of accessibility and human experience to data previously untouched. We need to find how and where culture meets data, consider new ways of working, large scale collaboration and what it means to innovate creatively.

~

Keri Facer, Tim Davies, Theresa Grant, Emer Coleman, Tom Steinberg, Sarah Hartley, Paul Bradshaw, Martin Belam, David Higgerson, Chris Taggart, Rachel Coldicutt, Katy Beale, Dan Williams, Fiona Moorhead

Long after our physical things have been crushed, burnt or tipped into a landfill, the digital 'ghost' has the potential to live on within the networked society searchable against any other data from the past, present or future. At the same time, people are rediscovering the satisfaction of making a tangible product by hand, and exploiting the possibilities of digital tools to invent new creative methods, and create otherwise unimaginable objects.

~

Chris Speed, Michael Eden, Sally Fort, James Boardwell, Andy Huntington

With the arrival and spread of the Internet the world has changed fundamentally. We know that the pace of innovation is accelerating but we are bad at anticipating what form it will take. Before the introduction of broadband it was easy to see that that there would be access to more information, that the internet would be able to carry video, and that people would use it to communicate more than before. And yet no one foresaw the special twist that Wikipedia, YouTube and Facebook would bring. We need now to imagine a future of infinite bandwidth, zero latency. This is coming closer with the spread of the next generation of networks now being built in countries like Sweden and Japan. Networks so fast and so immediate that bandwidth and latency don't really matter any more, like disk space doesn't really matter any more. What are the implications for privacy, control of information flow, the impact of multiple always-on channels?

~

Manchester Digital

Digital culture gave rise to alternative forms of value transfer and new notions of price, funding and payment structures: Crowdsourcing, P2P credits, social payment, micro patronage - the currency of tomorrow should be consistent with social, emotional and cultural values. One question is how emergent online 'peer production' and 'collaborative consumption' business models – and especially those arising out of open source approaches to intellectual property – relate to the burgeoning social enterprise movement. What are the options for collaborative growth that can combine economies of scale with local empowerment, coherent development with free knowledge?

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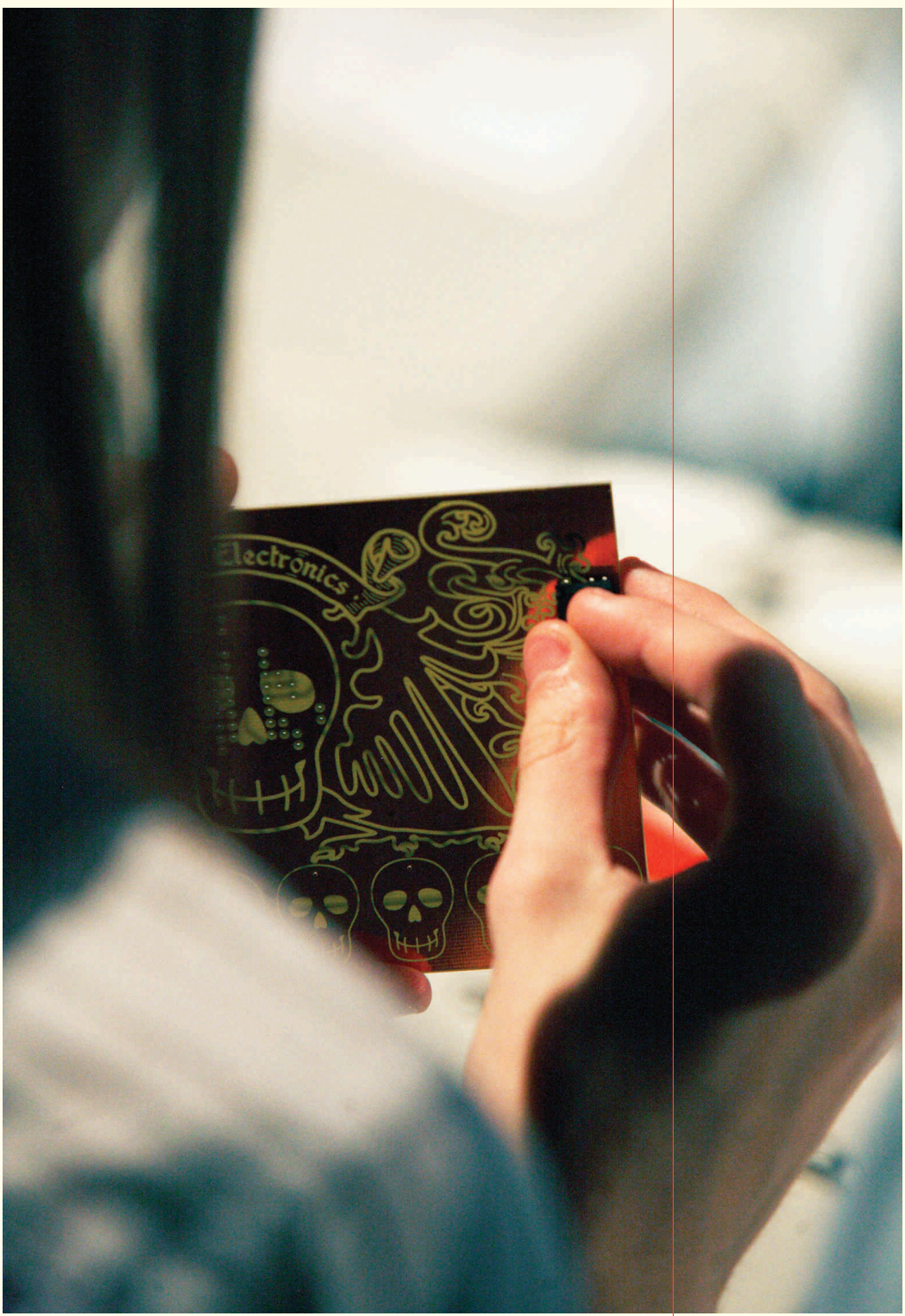
Ela Kagel, Geof Cox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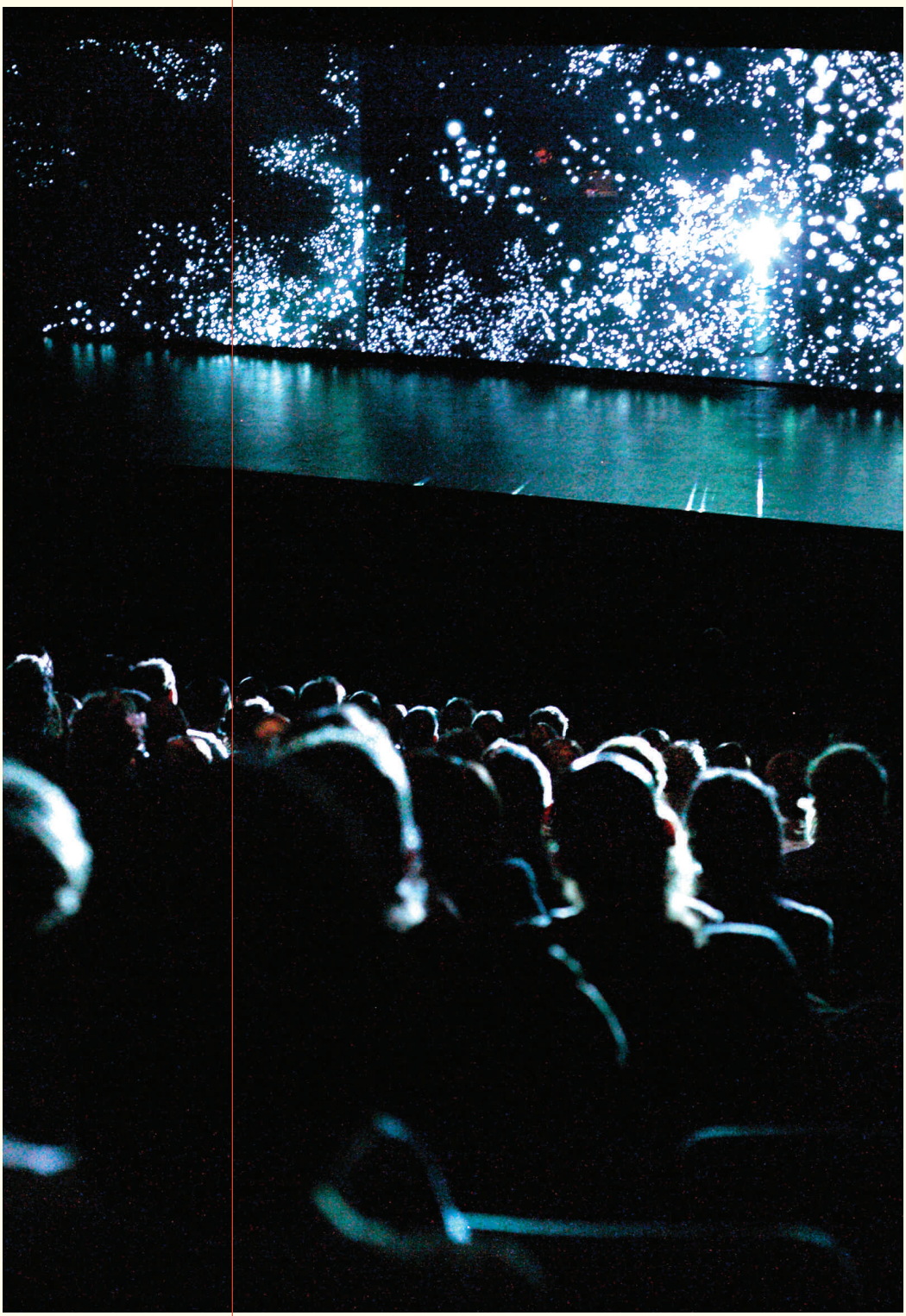

Digital Innovation

DREW HEMMENT

"The best way to predict the future is to invent it" – Alan Kay, 1971

Digital innovation is the introduction of a new idea, product or method exploiting the cultural, technical and commercial possibilities of digital technology. The central idea behind digital innovation is that a computerised, networked and collaborative world changes the ways people work, learn, play and create.

A history of digital innovation would include the seminal work at labs such as Xerox PARC in Palo Alto, California, responsible for major developments from laser printing to the modern personal computer, graphical user interface (GUI) and ubiquitous computing. Today digital innovation goes on in the research labs of major corporations, university research institutes such as Massachusetts Institute of Technology (MIT) and InfoLab21 at Lancaster University, and also in the studios of small digital companies and bedrooms of individuals around the world.

Innovation goes beyond the invention of new ideas to their successful implementation, and leads to change in the ways people make decisions and choose to act. It most commonly refers to the commercial development and introduction of products and services. Open Innovation (Chesbrough, 2003) refers to the ways companies can benefit from distributed knowledge, external ideas and external routes to market. This informs the idea that most successful innovation happens not as a linear process but in environments which encourage the circulation of ideas and approaches.

FutureEverything has a distinctive approach to digital innovation, that has evolved out of its artistic programmes, and its close and reciprocal collaboration with Lancaster University's ImaginationLancaster. This is an approach that is very different to that found in industry and many university labs. It is informed by the field of new media art and digital culture, by design thinking, and even the idea of art as social sculpture from Joseph Beuys. It builds on the way some aspects of digital culture are transforming art and society on a deep level, such as open source and global connectivity. New media artists have made a vital contribution to the open networks of digital culture and have helped to shape tangible new forms and practices in our digital society.

FutureEverything's work in digital innovation investigates both issues within the arts and the social impacts of new technologies. It explores emerging artforms, new kinds of media object, and novel forms of dissemination and audience experience. Outside the art sphere, it undertakes work in areas of policy, technology development, social innovation and academic research. And it applies creative approaches from art and design to explore themes such as open data, social sensing, new mobilities and distant collaboration involving original research, development, practice and publication.

Digital culture has today burst its banks. The era of one person, or one organisation, doing one thing at a time is over, and this presents challenges and opportunities. To build a digital innovation ecology we need the ability to translate and decode ways of working for others; this is also a creative act, opening new pathways, writing our collaborative future.

CHESBROUGH, H. W. (2003) *Open Innovation: The New Imperative for Creating and Profiting from Technology*, BOSTON, MA, HARVARD BUSINESS SCHOOL PRESS.

Prototyping The Future: Research, Innovation and Knowledge Exchange Methods

Drew Hemment

FutureEverything innovation labs are shaped around key themes likely to have a transformative impact, and run over 9-36 months. The collaborative method is based on curating digital innovation research involving a range of actors, with the focus on devising and testing prototypes through living lab deployments. The interventions can feed into building the ecosystems, the clusters, the communities, and generate connectivity across sectors and disciplines.

Innovation labs have been developed in collaboration with local government, universities, private sector companies and contemporary cultural industries. It has developed strong collaborative links with city partners in Manchester, making it possible to play and experiment with the DNA of the networked city.

The labs implement new ideas in digital culture through art and design prototypes. These art-design experiments enable participants today to experience some aspect of a possible future, critically and playfully, bringing the future into the present. The labs can interface with the FutureEverything Festival, which acts as a living lab and a global dissemination platform.

FutureEverything has grown into a national framework for knowledge exchange around art and digital innovation, providing tools and methods for driving innovation culture in urban environments. It acts as an intermediary, forming elegant partnerships around specific challenges or opportunities spanning the arts, policy, industry, research and various communities.

FutureEverything deploys a range of methods:

Curating & Connecting

Filter, focus and curate ideas to shape agendas, make relationships tangible, build trust and social connectivity.

Designing & Making

Co-design project concepts, hands-on building and prototyping to make possible futures tangible.

Participating & Testing

Large scale real-world interventions and trials involving various publics.

Evaluating & Sharing

Publishing toolkits and resources in free and accessible formats, feedback from peer networks.

FutureEverything develops its innovation labs in partnership with ImaginationLancaster at Lancaster University, and was a research output in the RAE2008 assessment which rated Lancaster as 3rd in the UK for research in Art & Design.

The FutureEverything methods have been published in the form of the Festival As Lab Toolkit (FALT).

futureeverything.org/innovation

Festival As Lab Toolkit

Drew Hemment

Festival As Lab and the Festival As Lab Toolkit (FALT) are a method and set of tools for developing living lab research projects and for a new kind of relationship between a festival and its partners and host city. Festival As Lab has been adopted as the inaugural theme of the ECAS festivals network and by festivals around the world including CTM (Berlin), CYNETART (Dresden), New Forms (Vancouver) and MUTEK (Brussels).

Festival As Lab

Festival As Lab is a novel approach to the living lab method. Living labs involve open innovation in real-world environments. They take research out of the laboratory to test ideas and prototypes with participants in real-life situations. This goes beyond simply testing with users by involving users in co-creation, experimentation and evaluation.

Festival As Lab adapts and exploits the the physical, social, infrastructural space of a cultural festival in order that it function as a living lab. Festivals that are city-wide and take place in a variety of social settings are most suited to "real-world" living lab experiments. Projects might take the form of an experiment, a prototype or a trial in a new type of art object, technology or form of participation.

Festivals can create agile RND environments for real-world rapid prototyping, open innovation and user-led design. They are participatory spaces that nurture play, risk and community creation. They are intermediaries between global creative communities, stakeholders and local citizens. They can be adapted to experiment variously in new forms of content creation and dissemination, technology and city development.

Cultural festivals can support emerging artforms which signpost the art and culture of the future. Festivals involve large numbers of people taking part in experimental, playful activity. They are crucibles where new ways of doing things can emerge. They enable the free circulation of people and ideas, connecting people at different levels, from grass roots to government and business leaders. They offer the ability to discuss and give attention (including media attention) to a topic or experiment.

For artists and organisers, living labs enable creatives to play with the DNA of the city, and provide a route to greater impact. For city partners, festivals are intermediaries that mitigate the risk of stepping into the unknown. For research partners, festivals offer creative license for imaginative ideas, a testing ground for prototypes, and access to participants and stakeholders.
For curators and audiences, living lab experiments can create compelling experiences.

Festival As Lab Toolkit (FALT)

The Festival As Lab Toolkit has been created to make it easier for people to stage their own Festival As Lab projects.

The goal of FALT is to:

— Provide the tools for festivals around the world to act as living labs

— Enable creative communities to drive open innovation

— Stimulate new RND in art, media, technology and city development

— Create intermediaries between policy, technology research, citizens and the arts

futureeverything.org/innovation

FutureEverything innovation, Festival As Lab was devised in collaboration with Lancaster University and is an open source project that will be updated and maintained by a community of developers and users.


RESTART
K·L
K+L

Open Data Cities and DataGM

DREW HEMMENT, JULIAN TAIT

Monday 21 February 2011 saw the launch of DataGM, the Greater Manchester Datastore, a partnership between FutureEverything and Trafford Council in Greater Manchester, that developed out of FutureEverything's Open Data Cities innovation lab.

The move to open up publicly held datasets is gaining momentum across the globe, and has been led by cities such as Vancouver. *Open Data* is a gateway to a data–based and digital society, it adds layers of accessibility to a huge amount of public information, on everything from the location of buses to census data. *Open Data* enables citizens to have meaningful interaction with the information that surrounds them. It can spark an innovation ecology, as people are able to build applications and services and create value (social and economic) by using the data. It both leads to cost savings and enables greater transparency in government, and can help to reengage a sceptical populace with the democratic decision making process through evidence–based policy decisions. *Open Data* is about collaboration and co–production where the ability to aggregate and disseminate information through the internet by individuals is a key enabling technology.

The embryonic idea behind *Open Data Cities* – How would cities evolve if all data was open? – emerged during FutureEverything's festival in May 2009. From an early stage, we saw there were huge opportunities. The emergence of the Greater Manchester City Region, and associated structural reforms, created a unique opportunity for the development of *Open Data* practice, and raised the potential for Greater Manchester to become a leader in city data led service and application innovation. *Open Data* had the potential to make Greater Manchester more equitable through equal data access but this would depend on people having the tools and the ability to act. In November 2009 FutureEverything was funded by the Manchester Innovation Innovation Fund (NESTA, Manchester Council, NWDA) to establish a sustainable *Open Data Innovation* (ODI) ecology in Greater Manchester. FutureEverything operated from a neutral position outside local government, whereas *Open Data* development has been led in most cities by the Mayor's office. This was a process of disruptive innovation that was both agile and pragmatic.

Operating on three levels, advocacy with the executive, knowledge exchange with data holders and managers, and community development with coders and independent software developers. Outcomes were the launch of *DataGM*, involving collaboration across all 10 local authorities in Greater Manchester and *Open Data Manchester* an open data community, which meets regularly, has an active web presence, and that has created applications profiled in the national press.

The *Open Data Cities* work continues in Manchester with the continuing support of the *Open Data Manchester* community, thematic hackdays in association with MDDA, advocacy across all sectors, programming *Open Data* within the FutureEverything conference and festival and through the FutureEverything Data Literacy programme. Champions of the *Open Data Cities* project include Theresa Grant (Trafford Council), Emer Coleman (London Datastore), David Eaves (Vancouver's Open Data initiative), David Hytch (TfGM), Chris Osborne (ITO World), and Victoria Moody and Phil Welch of Trafford Council who have worked alongside FutureEverything on DataGM.

Open Data Cities / DataGM has been nominated for a Big Chip Award 2011.

OurCity

ADAM NIEMAN, DREW HEMMENT, JON WHITTLE, WILL SIMM

OurCity combines physical connections in Manchester with feelings about and aspirations for the city. It is a prototype for a new way for people to have their voice heard and to act together to shape a new plan for the city, to reduce the gap between citizens and policymakers, and to form new groupings based on commitment to social action.

OurCity is a response to a new technology and the opportunities it provides for connecting people and place. It is driven by VoiceYourView [1], developed at Lancaster University, a system for collating and analysing thousands of individual comments, to reveal patterns of theme, sentiment and actionability. In *OurCity* comments are solicited in a number of ways, but mainly by text or via a web app optimised for smart-phones. The comments do not have to conform to a fixed format so the analysis avoids reducing individual perspectives to 'mere' statistics the way a survey might. The project combines individual pers-pectives with statistical insight in a way that helps viewers / participants identify themselves as active constituents of Manchester, not mere observers. In this way, *OurCity* is about how individuals relate to the whole and about how ideas about a city map to its geography.

VoiceYourView opens up a space that is otherwise inaccessible to information designers and data artists – somewhere between individual perspectives on the one hand and their abstract representation in statistics or raw data on the other. This is unknown territory; *OurCity* is a provisional attempt to explore that space – a reconnaissance. It is a nexus for mass participation and supports imaginative engagement with the city that follows an agenda set by its citizens.

Participants' aspirations and fears for Manchester are not solicited in a vacuum. The agenda has been set in a series of workshops with 11 and 12 year old children at Manchester Communication Academy. The school's values as interpreted by the children have seeded the comments on which *OurCity* is built. In an imaginative exercise the children explored their hopes and fears about the future and in a tour of the city centre they recorded their response to their city.

An installation in the FutureEverything art space encourages viewers to locate themselves in the city by expanding space. Engaging with the installation involves a sense of connection with the city beyond the walls of the gallery until the area you feel you are inhabiting is at least 10 km across. Engaging with the installation also involves locating your own feelings and aspirations for the city amongst thousands of others.

OurCity aims to imagine a city on all scales at once. There are as many cities as there are inhabitants – different people and communities attach different meanings to its buildings and landmarks. Thinking about a city as a whole usually wipes out individual perspectives, but if individuals could see the 'big picture' and individual perspectives at the same time this alone would transform Manchester, maybe for the better.

A ECAS Festival As Lab commission. Adam Nieman is leading a creative collaboration with Lancaster University, FutureEverything and Manchester Communication Academy.

1. VoiceYourView is a research project led by Lancaster University and funded by RCUK's digital economy programme.

FutureEverything Travel – OurTravel

NIGEL DAVIES, DREW HEMMENT

FutureEverythingTravel is an experimental social transport app trialled at FutureEverything designed to help people attending the festival make the best decision about upcoming journeys and create social travel communities based on the journeys they take. It includes access to the festival programme guide, quick links to navigation information for venues and an ability for festival goers to share travel information.

The system uses technology developed as part of OurTravel, a project exploring the use of social networking and mobile technologies to support better real-time, context-aware travel information for personal travel. We know that travelers rarely use travel information services for the vast majority of their journeys and that they are highly skeptical of travel information provided using conventional sources. The key innovation of the OurTravel system is its ability to source, process and disseminate travel information within communities that bring together travelers who undertake similar journeys such as commuting to work or attending events. Travel information is collected from travelers themselves and from those engaged in maintaining the transport infrastructure. This community focus is key to ensuring travelers trust the information provided. Travel communities can benefit from more reliable, responsive, trustworthy travel information, and users can make better informed decisions about how and when to travel.

At the FutureEverything festival we are looking to extend and evaluate OurTravel in a festival 'event-oriented' environment where users are typically attending many events that span multiple venues. For FutureEverything festival goers a mobile application is available as a free download that enables them to join travel communities based on events they plan to attend and receive context-sensitive travel information sourced from fellow event goers along with mapping and navigation features to support their journey decision making when travelling to the event venues. In addition data feeds provided from the FutureEverything organisers will provide up to-date event and festival information relevant to the events users are attending.

Trial evaluations of OurTravel within urban and rural environments will gather feedback on both the design of the application and its ability to improve the travel experience and influence personal travel choices. The goal is to eventually lay the foundations for an entirely new generation of travel information systems for the UK. OurTravel is a partnership between Lancaster University, In Touch Ltd and Carillion and receives funding from the TSB.

CHET – Collective Hedonistic Environments Toolkit

JOANNA SZLAUDERBACH, DREW HEMMENT

At the first sight, it's a usual club-ambience, a dance floor, colorful lights and a crowd of people moving to the rhythm of the music. But the appearance deceives. The immersive interactive environment devised by intolight covers the physical space with a virtual layer. Sound and image respond in real-time to the movements of the audience using motion tracking technology. This is the lastest form of the IDA (Interactive Dancefloor Application) project driven by the vvvv.org graphical programming environment. CHET toolkit is a ECAS Festival As Lab commission.

GloNet – Globally Networked Event

DREW HEMMENT, STEFAN AGAMANOLIS

GloNet (Globally Networked Event) is a new model for group-to-group globally networked events, developed for the FutureEverything Festival in May 2010. The goal was to innovate in new forms of distant participation, and to reduce the need for participants to fly to festivals and conferences.

Innovations in GloNet are the group-to-group connectivity, and in networking the social spaces and informal interactions. The project designed bespoke technology solutions, interaction forms, and event formats. It developed a network of project champions to participate in the satellite events, and in one case, led to a residency exchange between Manchester and Sendai (see p.xxx).

Live events in five cities used experimental formats to bring real and virtual audiences together around a central theme through talks, performances, an art installation and networked social spaces, all in one day and spanning five time zones. In each participating city we had a venue and remote groups, and we networked the social spaces, both physical and virtual. Participating cities were Manchester, Sendai, Istanbul, Sao Paulo and Vancouver.

GloNet 2010 Conference
The focal point of GloNet 2010 was a telepresence Conference, reducing the need for participants to fly to the festival hub. The conference was a huge success, seamlessly integrating participants around the world using a number of bespoke formats.

GloNet Talking Boxes
A design project by Distance Lab and FutureEverything, the Talking Boxes were scattered in the social spaces of the international venues, connecting multiple sites in an inviting physical form that supports spontaneity and chance encounters within the bustling social areas of the event.

GloNet Front Room
A telepresence artwork by Paul Sermon commissioned by FutureEverything, using virtual-studio technology to see someone on the other side of the globe magically transported into the chair next to you, and bring remote festival participants into a shared telepresent interactive and performative setting. View artist website.

Out and About, and Always On
A project illustrating how to get creative with ubiquitous infinite bandwidth. Groups in Manchester and New York roamed the city streets, capturing and sharing visuals and sounds in real time.

GloNet 2010 Serendipity City Challenge
Serendipity City Challenge invited thinkers and designers in the five international cities to to respond to a provocation by Drew Hemment and Adam Greenfield: if there is no creativity without serendipity, how do we foster serendipity in the networked city?

GloNet 2010 Remote City Themes
Each of the four remote international GloNet 2010 partners addressed a specific theme in relation to the overall festival theme (Sendai: Creative Cities, Istanbul: Urban Growth in an Age of Networks, Sao Paulo: Transitory Geographies, Vancouver: Open Data).

Developed by FutureEverything in partnership with British Council, Distance Lab and Lancaster University. Co-produced by FutureEverything with Sendai Creative Cluster Consortium, FesLab and TRUNK in Sendai, Japan, amber in Istanbul, Turkey, Vivo arte.mov, Museu de Arte de São Paulo (MASP) and Escola São Paulo in Sao Paulo, Brazil and W2 in Vancouver, Canada for the FutureEverything Festival 2010 in Manchester, UK. GloNet Front Room was supported by the University of Salford. The GloNet residency project was supported by Northwest Vision and Media. GloNet 2010 was sponsored by NorthernNet and funded by British Council.


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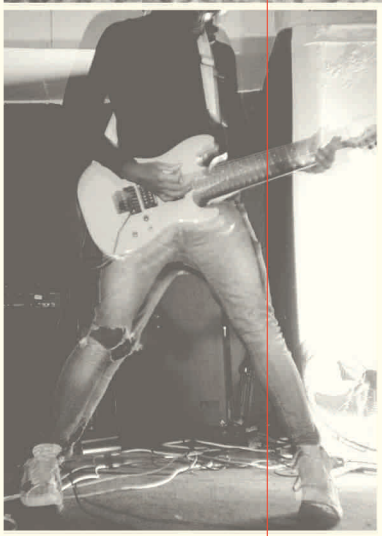
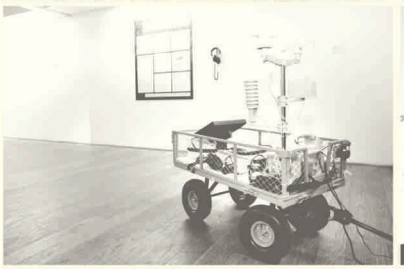

Complexity and the Enthralling Power of Networks

Manuel Lima

In 1948, American scientist Warren Weaver, in an article entitled **Science and Complexity**, divided modern science in three distinct stages: (1) The first period, covering most of the seventeen, eighteen and nineteen centuries, encapsulated what he denominated by *Problems of Simplicity*, considering that most scientists during this period were fundamentally trying to understand the influence of one variable over another. (2) The second phase, comprehending the first half of the 20th century, describes how researchers started conceiving systems with a considerable numbers of variables, but the way these large systems behaved was thought to be random and some times chaotic, to what he called *Problems of Disorganised Complexity*. (3) The last stage defined by Weaver, initiated in the second half of the twentieth century, is critically shaped by *Problems of Organised Complexity*, where not only exceedingly complex systems with an outstanding number of variables are widely accepted, but also the notion that these variables are highly interconnected and interdependent is firmly recognised.

Alluding to some of the foreseen scientific battles, Warren Weaver wrote back in 1948, *"These problems – and a wide range of similar problems in the biological, medical, psychological, economic, and political sciences – are just too complicated to yield to the old nineteenth century techniques which were so dramatically successful on two-, three-, or four-variable problems of simplicity."* [1] and he continues, *"These new problems, and the future of the world depends on many of them, requires science to make a third great advance, an advance that must be even greater than the nineteenth century conquest of problems of simplicity or the twentieth century victory over problems of disorganised complexity. Science must, over the next 50 years, learn to deal with these problems of organised complexity."* [2]

Warren's conjecture for our struggle with organised complexity is as true now as it has ever been. We're at this moment facing a period of critical transition, where cities are revealing their convoluted ways, far from previous immature urban conceptions; where ecosystems reveal an incomprehensible level of interdependency between its innumerable elements; where technology keeps shaping the way we communicate, share and organise information, by creating vastly intricate webs of knowledge; and where we, as alleged "masters" of this planet, are still unveiling one of the most complex networks known to man: our own brain. These are all *problems of organised complexity* that cannot be portrayed, analysed or understood by employing previous metaphors.

For most cases, these systems take the shape of a complex network – a prevalent topology in a wide range of domains, from genetics to ecosystems. Complex networks are enthralling structures that reveal many contrasting properties to the ones commonly expressed by centralised or hierarchical organisations. They are also exceedingly difficult to comprehend. As we continue to uncover many of the mysteries of nature and our own body, we realise that almost as staggering as the omnipresence of complex networks is our lack of knowledge concerning many of its behaviours and inner workings. The current challenge we face is not so much to uncover new ones, but to better understand the ones that already exist.

This new age of scientific discovery requires new tools of analysis and exploration, but above all, it demands a new way of thinking. The era of infinite interconnectedness demands a pluralistic conception of the world around us, able to envision the wider structural plan and at the same time examine the intricate mesh of connections

amongst its smallest elements. *"If you want to change the world, you change the metaphor"*, said Joseph Campbell, and Buckminster Fuller on a similar note stated *"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete"*.

One of the most promising disciplines to come up with a series of new metaphors is information visualisation. Originally coined by Jock Mackinlay and his User Interface Research Group at Xerox PARC in 1986, information visualisation relates to the *"use of computer-supported, interactive, visual representations of abstract data to amplify cognition".*[3] It's in essence a computer-driven transformation of abstract data (distinct from physical data – the earth, molecules, cells, human body, etc) into an interactive visual depiction aiming at insight – which in turn translates into *"discovery, decision-making, and explanation"*.[4] As a substantiated filter of relevance, able to disclose imperceptible patterns and hidden connections in our contemporary data-inundated world, information visualisation becomes imperative not solely as a response to the growing surge of data, but also as a supporting mechanism to the various political, economic, cultural, sociological, and technological advances shaping the coming years. Over the past decade, information visualisation has been able to shed light into an incredible array of domains, and by doing so it became the target of attention, turning the spotlight on itself. As more people are joining the practice, aided by increasingly accessible data and development tools, information visualisation is permeating mainstream media, and generating much enthusiasm in the design, publishing, and advertising communities. As a subset of information visualisation, network visualisation has witnessed a similar meteoric rise in popularity, far-reaching in its chosen topics. Its drastic growth symbolises in many ways a new age of exploration, similar to the golden age of cartography, charting innumerable undiscovered territories.

Generally, network representation is pursued under two main areas: graph drawing (under graph theory) and network visualisation (under information visualisation). In both disciplines *graph* is the preferred term to describe the pictorial depiction of a network through a set of vertices (nodes) connected by edges (links). But while graph drawing, as the name implies, deals primarily with the mathematical drawing of graphs, network visualisation extends beyond the mere geometric construct, employing elementary design principles aimed at an efficient and comprehensible representation of the targeted system.

Networks have multiple interpretations and definitions, usually depending on the particular discipline responsible for its study. There are also numerous insights that can be extracted from these structures: What are the nodes doing? How are they interacting? How many connections do they have? What are they sharing? This series of queries can lead to the identification of a taxonomy, or topological truth, of the analysed network. In this pursuit, network visualisation can be a remarkable discovery tool, able to translate structural complexity into perceptible visual insights aimed at a clearer understanding. It is through its pictorial representation and interactive analysis that modern network visualisation gives life to many structures hidden from human perception, providing us with an original "map" of the territory. Even though social networks (relationships of friendship, kinship, collaboration, common interest) have the longest history of quantitative study and analysis, network visualisation explores numerous phenomena, particularly in technological networks (the World Wide Web, train systems, air routes, power grids), knowledge networks (classification systems, information exchange, semantic relationships between concepts), and biological networks (protein-interaction networks, genetic-regulatory networks, neural networks).

But networks are not just a widespread scientific symbol anymore; they are also becoming a cultural and artistic meme. As researchers, scientists and designers across the globe try to make sense of a wide range of complex structures using a variety of technological tools at their disposal, they are stirring a growing number of artists infatuated by the networked schema and the disclosure of hidden territories. It's well documented that traditional artistic fields, such as painting and sculpture, have always been significantly affected by advances in science, and this fundamental cross-pollination between the two domains has prospered for hundreds of years.

Permeated by advances in network and complexity science, *Networkism* is a small but growing artistic inclination towards the portrayal of figurative graph structures. The movement is enticed by rhizomatic properties, such as nonlinearity, multiplicity and interconnectedness, as well as recent discoveries in a variety of domains, including Genetics, Neuroscience, Physics, Molecular Biology, Sociology, Computer Systems, and the Internet. A central source to this widespread influence is the recent outburst of network visualisation.

Networkism typifies a new conception of art, stretching as far as our scientific eye can take us and embracing all scales of human understanding, from atoms, genes, and neurons to ecosystems, the planet, and the universe. A seeming consequence of the complex connectedness of modern life, networkism follows a revised idea of metanarrative, or grand narrative, introduced by French philosopher Jean-François Lyotard in the 1970s, in this case pertaining to the omniscience of science. The network is at the centre of this belief, embodying a transcendent and universal truth, an archetype that represents *"all circuits, all intelligence, all interdependence, all things economic, social, or ecological, all communications, all democracy, all families, all large systems, almost all that we find interesting and important."* [5]

Ultimately, this growing art movement is an absorbing testimony of the network's widening influence.

1, 2
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3, 4, 5
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A World of Total Recall

Nashid Nabian, Carlo Ratti

A very important and unintended consequence of digitisation is that new technologies for storing, managing, and retrieving information give us the prospect of a world of 'total recall', where nothing is forgotten and the digitised log of any occurrence that is at hand anywhere and anytime defines our very being.[1]

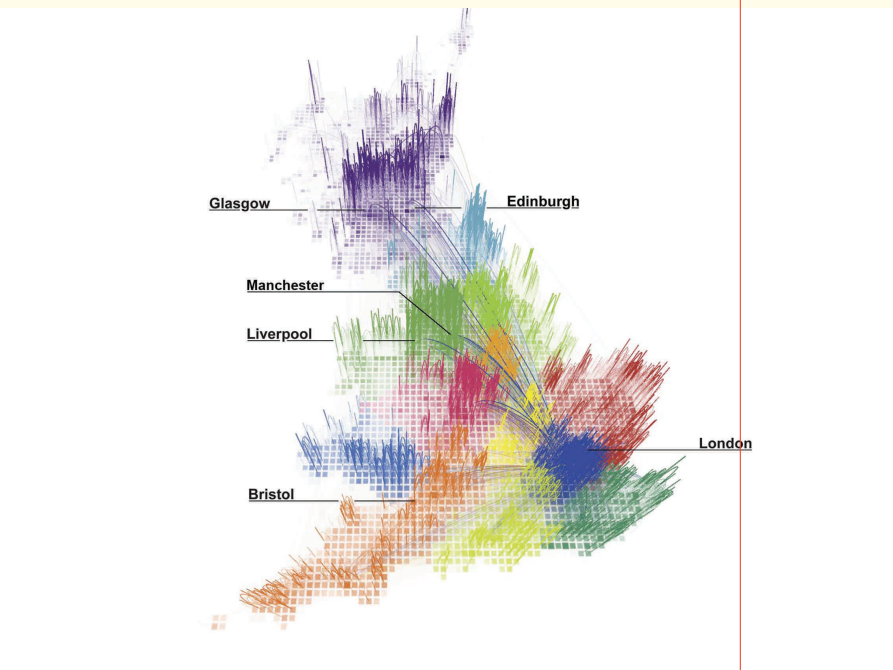
Our capacity to collect, store, and manage huge amounts of data has allowed us to maintain log files from many day-to-day activities that are mediated through digital and telecommunication technologies. Every time a phone call is made, a credit card is used, a text message or an email is sent, a Google query is submitted, a Facebook profile is updated, a photo is uploaded or tagged on Flickr, or a purchase is made at an online megastore like Amazon.com, an entry with the time and location of this action is added to a central digital dataset.

This condition of *total recall* has two consequences. On one hand, it raises disquieting prospects about surveillance, privacy, and the extent of personal space. It generates a certain level of anxiety to think that beyond a global, silent, mysterious, digitally enhanced network of data collection, storage, and management; someone, somewhere, is recording all of us, as in Calvino's short story *The Memory of the World*.[2] In this context, even something as innocent as taking pictures can become a source of apprehension. A good example is the case of Google Street View camera cars and how they have been banned in various countries and communities over concerns about their possible violation of personal space.[3] More generally, we are witnessing a fundamental change in the way we deal with our past, as Viktor Mayer-Schönberger would put it in *Delete: The Virtue of Forgetting in the Digital Age*.[4]

On the other hand, the magnitude of data that is collected, stored, and managed, as well as the breadth and depth of the living conditions that it applies to, offers unprecedented potential for researchers Our newly developed capacity to collect and analyse massive amounts of data is unambiguously transforming scientific practices from biology to physics, economics, sociology, political science, urban studies, and environmental sciences.[5] This reality inspires us at the SENSEable City Lab, a young but fast-growing research initiative at the Massachusetts Institute of Technology where we work at the intersection of data visualisation and computation in the urban context. A recurring theme of many SENSEable City Lab projects is the thorough examination of unexpected sources of data within an urban context, at a local or global scale.

At times, we *crowdsource* the process of data collection. With the amount of electronic storage available to us growing at an incredible rate, we are all being encouraged to put little bits of our lives online. Meanwhile, every time we mention something like a particular location in the city by geo-tagging and associating it with the content we share online, we are enlarging both our own digital footprints and those of whatever we mention in these digital narratives. In this way, each and every one of us is contributing to a perpetually expanding global knowledge-base about the spaces that we inhabit. Hence, a parallel digital version of almost every city in the world, as rich in diversity and content as its physical counterpart, is spread across different online platforms and virtual systems. These acts of communication generate different kinds of data that provide unique views on how people experience, navigate, and view the city.[6] The crowd therefore becomes a distributed network of sensors that allows us to understand the dynamic patterns of the city and the experiences of its citizens at a somewhat real-time rate.

In crowdsourcing, through programming on various user-generated, content-sharing or social networking platforms, we tap into vast repositories of content that is geographically and temporally tagged.



This information is associated with defined points in time and space either by those who have contributed it, or through an automatic cross-association. For example, Flickr's large pool of photos (and its inherent metadata that includes temporal, semantic, and geographical tags) can be accessed to map the space as it is seen and experienced by those who use this platform. What is captured by the photographer can be translated to a more quantifiable phenomenon of mapping different behavioural patterns across time and space, answering questions such as:
What does the crowd see in the city?
What does the crowd enjoy about the city?
How does the crowd move within the city?
A good example of this technique is SENSEable City Lab's World's Eye project, where the density and flows of photographers in the Iberian Peninsula are visualised by aggregating retrieved information from the Flickr platform. The mapped data allows for understanding the attractiveness of Barcelona as a leisure city and shows its points of interest. Such combinations of *crowdsourcing* and mapping exercises provide invaluable information about centrality at an urban scale. And to spatial practitioners, the centrality of particular points in space is important, since urban centres are magnets for capital, human, and material resources, as well as being hot spots where crowds gather expecting services and a quality spatial experience.[7]

In other cases, we leverage existing systems that have been developed for other reasons but can function as a source of information on how our cities operate. A byproduct of the various technologically mediated services provided in urban areas are vast datasets that store information about how these services are used by their intended recipients. With advances in the field of data connectivity and telecommunication technologies, connection to the aforementioned datasets is improving, allowing data management engines to get real-time updates on the state of the monitored entities. An example of this condition is the data about the use of cellphone, landline, and other

telecommunication networks. SENSEable City Lab has been among the first research initiatives to look at this data as an invaluable source of information about urban dynamics. In our *Real-Time Rome* project, we used Rome's cellphone activity log to reveal the pulse of the city via the emotional landscape generated around certain public events, such as the World Cup soccer match and the Madonna Concert. The project looked at how the positions and activities of mobile phones can be used to "sense" people's presences. When aggregated at the highest possible level, mobile location data does not impinge upon the privacy of individuals, but can return important information on the concentration and relative weights of human activities in the urban environment, as well as flows and patterns of city use.

Visualisations and analyses of such data can be obtained in as close to real time as possible. Such visualisations allow for answering various questions about urban dynamics: How many people are there in a given area? Where is traffic piling up? What percentage of people have left the critical area? What is the current demand for public transportation? How many people will look at that billboard? What is the pattern of inflow and outflow of people to and from the city? What's the hottest spot in town right now?

Last but not least, we also develop our own customised sensor networks, where sensing mechanisms that are also enhanced with connectivity functionality are embedded within the physical environment in somewhat unconventional places to collect information about particular urban dynamics and report back to a central data-management mechanism. An example of an implemented sensor network is the Track Trash project. This project consisted of digitally enhanced tags that could be attached to objects and report their location to an Internet backbone infrastructure via cellular network. Trash Track made use of these location-reporting tags to track urban disposal and study the efficiency of the urban waste-removal chain. The platform allowed researchers to analyse the acquired data and empirically address a multiplicity of questions about the dynamics of the urban removal chain, as well as the relationship that a city or region develops with its waste disposal habits: Is our removal chain efficient? Is hazardous waste managed properly, or are there loopholes in our system that need to be taken care of? Is recycled waste really recycled, or does it end up in dumps? [8]

One of the fundamental challenges of data-driven science, regardless of the source and specificity of data, is to reveal data patterns that are not initially visible—patterns that are recognised by investigating collected information. This happens through the generation of info-aesthetics that highlight the relationships between different dimensions of information and the factors that contributed to the dynamics recorded in a given dataset. Hence, data visualisation gains importance in defining both the virtual and real-life forms of contemporary urban reality. In this regard, we could truly say that in today's world, form follows data.

1 *MyLifeBits* is a Microsoft research initiative looking at the prospect of a digitally implemented total memory. The project is a decade-long effort to digitally record everything in computer-science researcher Gordon Bell's life including what he did, saw, read, ate, and felt. The project was published as a book: Bell, G. and Gemmell, J. (2009) *Total Recall: How the E-memory Revolution Will Change Everything*, New York: Dutton.

2 See *Calvino, I.* (1968) La memoria del mondo e altre storie cosmicomiche, Milano: Club degli editori.

3 Authorities in many countries have been suspicious of Google Street View activities, which include collecting data from private Wi-Fi networks (WiFi sniffing) and taking photographs, fearing that this conduct falls under the category of 'unfair and unlawful collection of data' as well as 'invasion of privacy and individual liberties.' In some places, such as Greece and Switzerland, this has resulted in Google's Street View camera car activities being banned. See the report on investigation of Google Street View by the Electronic Privacy Information Center at epic.org/privacy/streetview

4 Mayer-Schönberger, V. (© 2009) *Delete: the Virtue of Forgetting in the Digital Age*, New Jersey: Princeton University Press.

5 Lazer, D. et.al. (2009) *Computational Social Sciences*, Science, vol. 323, 721-723.

6 Pereira, F. C., Vaccari, A., Giardin, F., Chiu, C. and Ratti, C. *Crowdsensing in (a?) Web: Analyzing the Citizens' Experience in the Urban Space*, SENSEable City Lab, MIT, USA.

7 http://senseable.mit.edu/worldseyes

8 http://senseable.mit.edu/trashtrack

Music Programme 2011

Amalie Roberts

With the technological developments of the Internet, music is now freely available, immediately accessible and instantly forgettable – how do the artists of today, and the artists of the future, respond to such an overwhelming supply? The responses of the artists selected for the FutureEverything Music programme vary – but are united in their unswerving attempt to create something original, unique and sincere. Distinctions between high and low culture, and between musical form and genre disappear in the beautiful fusion of sound cultures.

Steve Reich hosts a retrospective of his work, inviting contemporary musicians from the Royal Northern College of Music to perform pieces which eloquently blur boundaries between electronic tradition and minimalism, exploring themes of repetition common to both art music and popular forms. The many higlights in the 2011 musical programme also include the Los Angeles's art rock group **Warpaint**, nominated by BBC for the Sound of 2011, and the Baltimore "dream pop" duo **Beach House**.

Referencing the earliest days of cinema, whilst creating new experiences for contemporary audiences, both 65daysofstatic and BBC's **Rob da Bank** create real-time, live soundtracks to film screenings. Both performances take a live, improvised approach, very different to the invisible sophistication of technologies designed to effortlessly seam the audio with the visual. CHET by intolight, commissioned through the European Cities of Advanced Sound (ECAS) network, creates an immersive interactive environment in which the music and visuals respond in real-time to the movements of the audience as they dance.

As well as paying homage to past performative traditions, the music of the future claims its inspiration from the overload of musical style and genre available at the click of a mouse. The incessant barrage of musical content leads the creators and thinkers of tomorrow to strive for ever-new and ever-more inventive means of expression. From **Fucked Up**, who stretch the punk genre to its experimental limits, through to the intricate delicacy of **Scout Niblett**, and the inventive, fresh sound of **Das Racist** the resulting performances are a dizzying fusion of style and genre, replacing parody and pastiche with genuinely sincere attempts to create something new and meaningful.

If the music of the future must reclaim its audiences away from the endless accessibility of digital online music – and importantly away from the singular experience of downloading and bedroom listening – then this future lies in celebrating the 'live' experience. **Gang Gang Dance** combine traditions of electronic, dance and guitar music to create an almost tribal experience for audiences. Repetition and beat play an equally important role for **Group Doueh** and **Fucked Up**, as well as the high-quality club nights presented at the festival, star-studded with names such as **Kyle Hall**, **Daedelus**, **Martyn** and from Vakant Records **Tolga Fidan** and **Alex Smoke**.

A concern with a quality live experience also manifests itself in the selection of venues. **Black Heart Procession** perform in the wonderful gothic environment of St. Philips' church. Both **Denis Jones** and the **Raise Your Voice Collective** perform from inside art galleries, revealing another layer of meaning for audiences. Musical performances take place in environments designed to carry and lift sound, creating atmospheric and memorable experiences for audiences.

International and Research Partners 2011

ECAS — *Networking Tomorrow's Art For An Unknown Future*

ECAS is a new European festivals network supported by the European Union within the Culture Programme (2007-2013). Beginning in 2006, the ECAS network has supported cultural connections between a large number of festivals dedicated to advancing sound cultures, music and related arts. ECAS (European Cities of Advanced Sound) has now grown to encompass Europe, North America, South America and Australia, resulting in the creation of a global network, **ICAS** (International Cities of Advanced Sound).

ECAS is a co-production between:
CTM (Berlin, Germany) / **FutureEverything** (Manchester, UK) / **Todaysart** (The Hague, Netherlands) / **Unsound** (Krakow, Poland) / **Insomnia Festival** (Tromsø, Norway)
Skanu Mezs Festival (Riga, Latvia) / **musikprotokoll** (Vienna, Austria)
Cimatics, (Brussels, Belgium) / **CYNETART Festival**, (Dresden, Germany)

Sendai: Creative City

Sendai in Japan bore the brunt of the devastation caused by the 2011 earthquake and tsunami. Much like Manchester, Sendai is a creative city to the north of a major capital city. In recent years the city of Sendai developed a close partnership with Manchester and FutureEverything. The founder of FutureEverything, Drew Hemment, was invited to Sendai's Creative Summit in 2009. Sendai was a participating city in the GloNet globally networked event (pg 31), with Sendai Creative Cluster Consortium, FesLab, TRUNK and local speakers and artists taking part. In a residency exchange during FutureEverything 2010, Jon Grant from Cahoona in Manchester visited Sendai, and designers from Sendai's WoW visited Manchester. Mr Gen Amano, Director of Industry Promotion was hosted in Manchester by FutureEverything, and established links with leading figures in the city's creative economy and support agencies. To reciprocate the links Sendai made to Manchester, in 2011 FutureEverything has dedicated a festival event to Sendai, to celebrate Sendai as a creative city (pg 13).

Lancaster University

Lancaster University plays a leading role in FutureEverything programmes. ImaginationLancaster is an open and exploratory research lab that investigates emerging issues, technologies and practices to advance knowledge and develop solutions that contribute to the common good. Lancaster Institute for the Contemporary Arts (LICA) was rated in the UK's top 3 for Art and Design research by the UK government's recent Research Assessment Exercise. FutureEverything forms part of the research environment at Lancaster Institute for the Contemporary Arts (LICA), and part of the interface between Lancaster University and various stakeholders and publics.

HighWire is a £5million Digital Economies Doctoral Training Centre creating innovative people for radical change, with funding available for exceptional PhD students with backgrounds in computing, design and management.

Professional Arts Practice MA (ProCAP) is an MA for practising artists and graduates that aims to equip them to develop a professional career, co-directed by Drew Hemment, Founder of FutureEverything.

The relationship between Lancaster University and FutureEverything was nominated for the Arts & Business Award 2010, and is the subject of at least one international PhD study.

Festival Participants 2011

International Award Jury
Bruce Sterling, Yukiko Shikata, Jeremy Myerson
Jury Chair: Colin Fallows

International Award Advisory Group
Gavin Artz, Dooeun Choi, Regine Debatty, Gisela Domschke, Marcos Garcia, Karen Gaskill, Jo Kazuhiro, Anthony Townsend

Festival Peer Review Panel
Paul Amatai (Eyebeam), Jane Anderson (CUBE), James Auger (Royal College of Art), Bryony Bond (Freelance curator), Heather Corcoran (FACT), Mark Daniels (New Media Scotland), Michel van Dartel (V2), Michael Eden (Maker), Patrick Henry (Open Eye), Fee Plumley (Australia Council for the Arts)

Conference Participants
Robin Greene (Delib), Ian Anderson (Overlay Media), Will Luton (Mobile Pie), Elizabeth Turner (iconomical), David Hytch (GMPTE), Razia Ahmed (Google), Richard Russell (Google), Jonathan Raper (Placr Ltd.), Tom Steinberg (mySociety), Sir Richard Leese (Leader, Manchester Council), Thomas Birtchnell (Lancaster University), Theresa Grant (Trafford Council), Andrew Stott (Public Sector Transparency Board), Tim Davies (Open Data Impacts), Dave Carter (Manchester Digital Development Agency), Keri Facer (Manchester Metropolitan University), Mark Lever, David Bausola (Philter Phactory), Chris Speed (Edinburgh College Of Art), Juha van t'Zelfde (VURB), Luis Bettencourt (Santa Fe Institute), Tom Chatfield (Fun Inc), Paul Bradshaw (City University/ Birmingham City University), Martin Belam (Guardian News & Media), David Higgerson (Trinity Mirror), Chris Taggart (OpenlyLocal), Sarah Hartley (Guardian), Meg Pickard (Guardian), Dan Catt (Guardian), Drew Hemment (FutureEverything), Kars Alfrink (Hubbub), James Bridle (booktwo.org), Sue Thomas (De Montfort University), Rachel Coldicutt (Culture Hack Day), Katy Beale (Culture Hack Day), Dan Williams (Pervasive Media Studio), Fiona Moorhead (Crafts Council) , Duncan Speakman (Circumstance), Émilie Grenier (Comme des Machines), Toby Barnes (Mudlark), Ben Bashford (Creative Consultant), Adam Nieman (Artist), James Boardwell (Folksy), Michael Eden (Central Saint Martins College Of Art And Design/Royal College Of Art), Sally Fort (Craft And Design Curator), Andy Huntington (BERG), Bill Thompson (BBC), Geof Cox (Social Firms UK/The Common Cause Foundation/ Guardian Online/FRSA), Ela Kagel (Freelance Curator and Producer), John Urry (Lancaster University), Simon East (ShoZu/DriveGain), Ingi Helgason and Michael Smyth (Urban Friction), Joëlle Bitton and Julien Dorra (Culture Lab), Andre Ktori, Gregg Raynor and all at Future Music Labs, Hwa Young Jung and all at Mad Lab

Art Participants
Aaron Koblin, Adam Nieman, Alex Ryley (Mutant Labs), Antony Hall, AlphaSphere, Area Code, Berg London, Carlo Ratti (MIT Senseable Cities Lab), Chris Milk, Dave Griffiths, Darius Pocha (Moksha), Fab Lab Manchester, Hazel White and Jo Hodge (Dundee University), Intolight, Iohanna Pani, John Geraci, John O'Shea, Jon Whittle & Will Simm (Lancaster University), José Luis de Vicente (Bestiario), Kevin MacDonald, Kimchi and Chips, Marcos Lutyens, Claude Heiland-Allen, Antonios Galanapoulos, Me and the Machine, Michael Eden, Nadeem Haidary, Nathalie Miebach, Nicholas Felton, Paul Sermon & Charlotte Gould & Gary Peploe & John Boothe (Salford University), Robin Fox, Sophie McDonald and Eunjoo Shin (MzTEK, SPACE Studios), Tapio Mäkela, Timo Arnall, Tom Corby (University of Westminster), WoW, Yu-Chen Wang, Zach Gage

Music Participants
65daysofstatic, Alan Bishop & Rick Bishop (Brothers Unconnected), Alex Smoke, Beach House, Black Heart Procession, Das Racist, Daedelus, Dark Dark Dark, EMA, Films, Fucked Up, Gang Gang Dance, Group Doueh, Highlife, Kong, Kyle Hall, Laurel Halo, Martyn, Micron DJs, RNCM Chamber Ensemble, Rob da Bank, Scout Niblett, Starslinger, Stranger Son of WB, Steve Reich, Suuns, The Answering Machine, The Radio Dept.,Tolga Fidan, Warpaint

Showcase Jury
Hermeet Chadha (BBC 6 Music), Lynden Campbell (Domino Recording Company), Raj Chaudhuri (Bleep.com), Denis Jones, Kevin McManus (Liverpool Vision/ Merseyside ACME), Kevin Moore (In The City)

Showcase Participants
Paddy Steer, Messner, Raise Your Voice Collective, Good Grief! & Museums Press, The 2 Dollar Show, The Electronic Exchange, Refuse to Lose, Secret Wars, One69a, Mind on Fire, Neighbourhood, Ping Pong Club, Pumping Iron, Contort Yourself & Juicy, General Interest, Duncan Faggin (Dutch Uncles), Patick Ryder (Bring on the Dancing Horses), Jonny Sture & Camille Bertin (MAY 68), Mike Cahill (Well Wisher), Rosie Melon, Good Press DJs, Oll Farrell (2 Dollar Club), Ad Griffiths and Zac (Beach Cult), Mark (Up The Racket), Scott Beaman (Money)

Credits

The 2011 edition of the FutureEverything Festival is dedicated to Howard Raynor, Chair of the Board of FutureEverything. A visionary and esteemed figure, his legacy lives on in FutureEverything, and in the lives of the people he touched and inspired.

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Callum Higgins - Showcase Coordinator
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