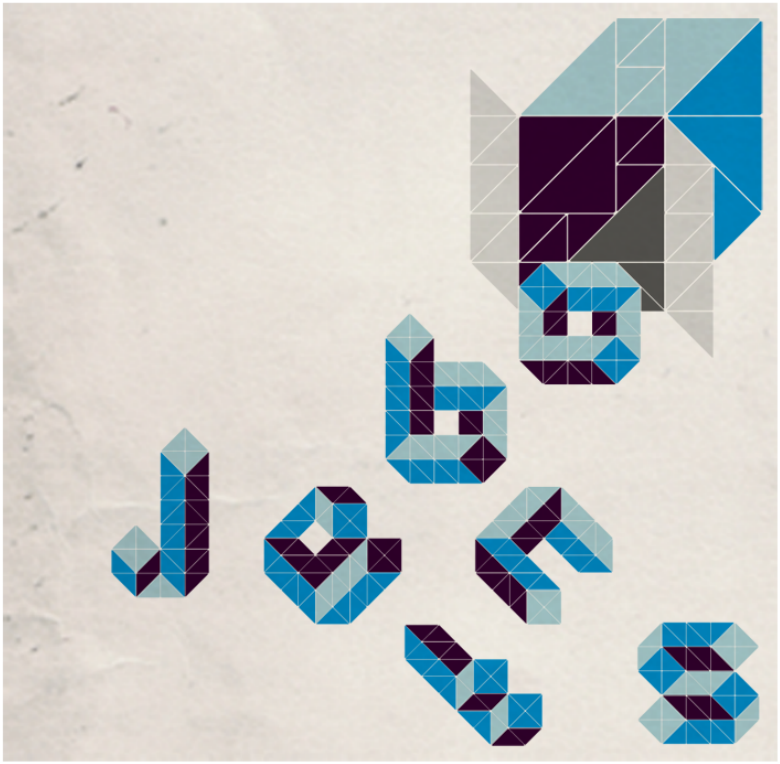
V2_PRESENTS
BLOWUP READER #3

# The Era of Objects



BLOWUP

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Blowup is a series of events and exhibitions that explore contemporary questions from multiple viewpoints. Blowup zooms in on ideas, bringing into focus clear pictures of how art, design, philosophy, and technology are transforming our lives -- or reinforcing the status quo.

# Introduction: The Era of Objects

MICHELLE KASPRZAK

This e-Book, the third in the series of Blowup Readers released by V2_, explores the future of objects, beyond the clichéd fantasy of the flying car.

About V2_:

V2_, Institute for the Unstable Media, founded in 1981, is an interdisciplinary center for art and media technology in Rotterdam (the Netherlands). V2_ conducts research at the interface of art, technology and society. V2_ presents, produces, archives and publishes about art made with new technologies and encourages the debate on these issues. V2_ offers a platform where artists, scientists, developers of software and hardware, researchers and theorists from various disciplines can share their findings. Art and culture play an essential role in the social embedding of and attitude towards technological developments, and V2_ creates a context in which technological issues are explored through critical reflection and practice-oriented research.

About Blowup:

Blowup, launched in 2011, is a series of events and exhibitions that explore contemporary questions from multiple viewpoints. Blowup zooms in on ideas, bringing into focus clear pictures of how art, design, philosophy, and technology are transforming our lives -- or reinforcing the status quo.

Each Blowup event will provide a deeper understanding of a theme relevant to this moment in time. Some events will ask you to be hands-on, and some will involve just listening or looking. No two events will be the same: Blowup events mix artists and theoreticians; mix formats; challenge assumptions; and take risks. Investigating topics ranging from art for animals to speculative designs for future objects, each Blowup will surprise and inform.

Alongside each event, a Blowup Reader exploring the theme with texts from a wide range of sources will be released in e-Book format.
Blowup is curated by Michelle Kasprzak.

## Blowup: The Era of Objects

Speakers included Julian Bleecker (US), Alexandra Deschamps-Sonsino (UK/IT), and Anab Jain (UK/IN). Following a short talk show with the three guests, the audience collaborated with our invited experts in an 'open think-tank': a guided speculative design session wherein we addressed the product design challenges of the near and not-so-near future.

The event occurred on September 29, 2011 and was streamed live. Archived footage of the event will be made available at http://live.v2.nl

## Notes from the Curator:

This e-Book may be our richest edition yet, with texts from each of our invited guests for our Blowup event which was held on September 29, as well as contributions from leading thinkers such as Bruce Sterling, Rob van Kranenburg, Ilona Gaynor, and Ana Serrano & Tim Warner.

The scope of this reader is purposefully broad. The things that we use and how they are networked and attuned to us and our surroundings is a huge subject. The writers who have contributed to this e-Book approach the Internet of Things, design fiction, product design, speculative design, and the smart objects and environments of our future with all the shades of grey of humanity -- whether it's a fictional dialogue over a spimey chair, imagining oneself as a spy, or using stories from the sea voyages of old, when there was still physical territory to discover.

When devising this event and reader, I had ongoing conversations with our three guests – Julian Bleecker, Alexandra Deschamps-Sonsino, and Anab Jain. We all agreed it was important to talk but also important to do and to make, and given the tone of world events we also felt preoccupied with doomsday scenarios. The fanciful talking fridges and flying cars that sometimes appear when people daydream about the future of objects didn't figure into our thoughts as much as thinking what objects we might need around us if we suddenly found ourselves in Cormac McCarthy's **The Road**.

The texts in this reader cover a lot of ground. The Era of Objects event was designed as a mostly hands-on, 'more hammering less yammering' (to quote Julian Bleecker) kind of event, and the texts presented here aim to support the experiences had by the participants in that event, as well as function as a standalone reader for others.

I hope you enjoy this reader and the archived footage of the public presentations that were part of this programme, at www.v2.nl. I look forward to welcoming you at the next Blowup event entitled **We Are All Crew***, celebrating the intellectual legacy of media and communications guru Marshall McLuhan with an exhibition, film screening and lectures November 3, 4, and 5 at V2_.

Michelle Kasprzak
Curator, V2_ Institute for the Unstable Media

Rotterdam, 28/09/2011

* - The title is derived from a quote by Marshall McLuhan: 'There are no passengers on Spaceship Earth. We are all crew.'

# Design Futurescaping

ANAB JAIN, JON ARDERN, JUSTIN PICKARD
SUPERFLUX, UK

## Design Futurescaping?

In 2009, Bruce Sterling hailed the arrival of 'a networked, interactive, increasingly speculative futurity' (Sterling, 2009: 28). In this, a world where 'the imagination has become an organized field of social practices' (Appadurai, 1990) – that which Sterling dubs 'speculative culture' – design futurescaping emerges a hybrid practice, unfolding at the intersection of foresight and critical design. First presented as a phrase at Lift 09 by Anab Jain, the 'futurescape' is cast as an analogue for the physical landscape; a heterogeneous topography of unevenly-distributed futurity; infinitely extendible; punctuated with features and landmarks.

Drawing extensively on science fiction's tactics for cognitive estrangement, design futurescaping borrows wholesale the notion of the 'novum'; 'the central imaginary novelty in an sf text, the source of the most important distinctions between the world of the tale and the world of the reader.' (Csicsery-Ronay, Jr., 2008: 47) As a combination of multiple socio-technological novums, layered in space, Sterling describes the futurescape as having 'user-centric Google maps rather than officially certified paper road maps (…) not some Marxist road to utopia, [but] a navigable global sprawl.' (Sterling, 2009: 28) In this, he gestures at some of the collaborative, networked character of design futurescaping. Informed by the 'pop-up' infrastructures and anti-heroic, future-facing rhetoric of twentieth-century designers such as Superstudio, Archigram and Ant Farm, design futurescaping channels multiple voices to create hybrid, humane alternatives to the deterministic, 'business-as-usual' consensus future.

Design futurescaping also has something of an activist bent. Sharing a filial similarity with the notion of 'urban acupuncture', which has been described by architect John Southern as 'a surgical and selective intervention into the urban environment' (Kaye, 2011), design futurescaping seeks to make similar, small-scale interventions in the technological imaginary. As 'a form of negotiation between sites of agency (individuals) and globally defined fields of possibility' (Appadurai, 1990), we can use 'micro-targeting,

low-cost, democratic, and empowering tactics' (Kaye, 2011) to actualise details from the scenarios, catalyse shifts in public discourse, and – ultimately – effect lasting behavioural change.

## 'Thick' Futurescapes

The persuasive power of a futurescape depends, to a great deal, on its nuance and specificity. Creating plausible images of a complex and heterogeneous future necessarily entails a greater level of detailing than the brief, textual vignettes of conventional scenarios work. In this, design futurescaping has borrowed extensively from Clifford Geertz's notion of ethnography as a form of 'thick description' (Geertz, 1973: 10). For Geertz, grasping the full meaning of actions, objects and practices requires a 'thick' semiotic analysis, appraising each as a form of cultural communication, viewed as if by an insider, and located in the widest possible context. In this, we can begin to detail a 'slice' through future society – the product of multiple trends, actors, agents, technologies, and 'thick' meanings.

Consider the futurescape of the film Blade Runner (1982), brainchild of visual futurist Syd Mead; 'a seemingly densely real creation which grafted futuristic imagery over the base of grittily textured leftovers from today's [Los Angeles] … a glittering neon world of advertising and enticing images perched high on skyscrapers hunched over the tackily ethnic crowds bustling past street-level shops, stores, and vendors.' (Carper, 1991: 186) By successfully engineering an abundance of detail, Mead and Scott successfully immersed audiences in the film's future setting.

In our project, 'Power of 8', the futurescape of 'Acres Green' stood as a cypher for Brentford, a suburb of London. Futurescaping the cyborg ecosystem of a relatively bounded and autonomous local unit, it became possible to 'map out, without insuperable methodological difficulties, which actors [found] themselves in which relationships to which other actors, … developing a comprehensive picture of the patterns of interaction that make up the local community.' (Erikson, 2001: 58) In the research stage of this particular project, one of our participants described the dynamics of mapping and montage as 'a kind of post-psychogeography where the dérive is reverse-engineered. Instead of drifting aimlessly through unknown cityscapes, we have plotted a route through a psychogeographic territory of our own making … with yet unexpected consequences.

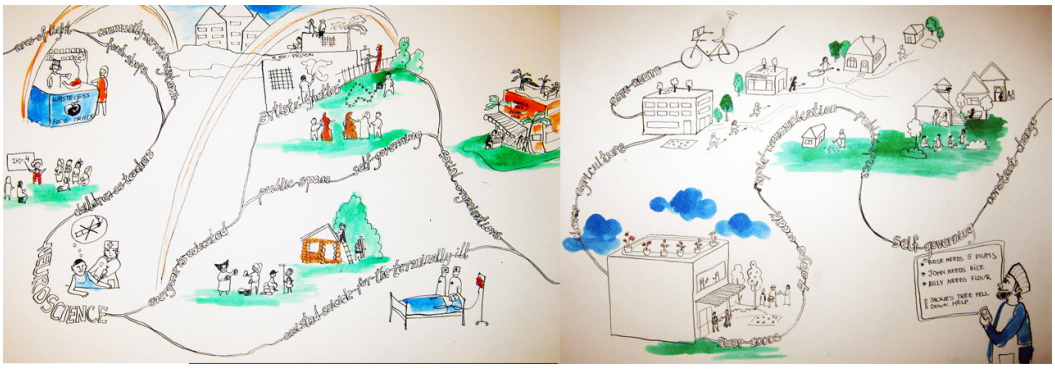



Fig. 1: Illustrations by participants narrating stories of their 'future neighbourhoods' using post-psychogeography.

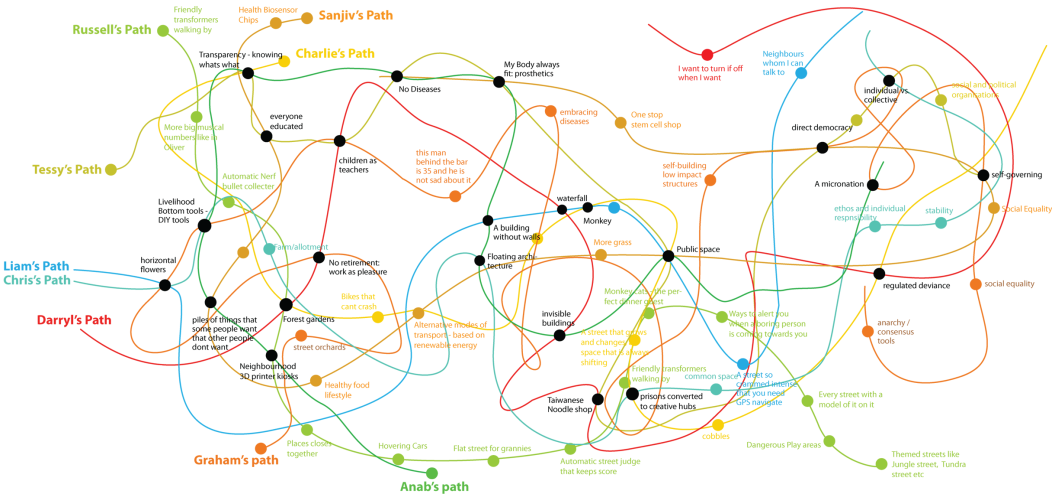



Fig. 2: An overview of the journeys that all participants took in this 'future neighbourhood'.

## Networked Futurescapes

An emphasis on 'thick' detailing and holistic systems lends credence to our visions of the future, aiding in the description of a world that is no longer 'an archipelago of isolated cultures, but an unbounded system of multiple interrelationships.' (Erikson, 2001: 305) As globalisation weakens borders and boundaries, opening the floodgates to 'an intensified flow of people, commodities, ideas, and images on a global scale' (Erikson, 2001: 297), it becomes more important than ever to familiarise ourselves with a world where nation and neighbourhood are merely 'node[s] of a complex transnational construction of imaginary landscapes' (Appadurai, 1990); a future evermore deeply entangled in inter- and intra-dependent networks of people, artefacts, systems, and services.

Writing in the early 1990s, sociologist Bruno Latour grasped the emerging logic of this world sooner than most. Using the newspaper as fodder for his exploration of an inchoate 'actor-network theory', he traced some of these complex networks through the news stories of the day:

> 'On page eight, there is a story about computers and chips controlled by the Japanese; on page nine, about the right to keep frozen embryos; on page ten, about a forest burning, its columns of smoke carrying off rare species that some naturalists would like to protect; on page eleven, there are whales wearing collars fitted with radio tracking devices; also on page eleven, there is a slag heap in northern France, a symbol of the exploitation of workers, that has just been classified as an ecological preserve because of the rare flora it has been fostering! On page twelve, the Pope, French bishops, Monsanto, the Fallopian tubes, and Texas fundamentalists gather in a strange cohort around a single contraceptive.' (Latour, 1993: 2)

As with Syd Mead's designs for Blade Runner's future L.A., Latour relies on a layering of relational details to approach the challenge of representing an infinitely extendible, heterogeneous totality – much too large to be represented through traditional means.

In a literary context, James Bridle answers this challenge of representation with the term 'network realism'; writing 'that is of and about the network … posit[ing] an increasingly 1:1 relationship between Fiction and the World.' (Bridle, 2010) Similarly, design futurescaping is a form of network realism 'because of the way that it talks about the world, and the way its knowledge of the world is gathered and disseminated.' (ibid.) Acres Green and Little Brinkland exist on a timeline, but, as Bridle points out, 'it's not a simple line back-to-the-past and forward-to-the-future … [but] a gathering-together of many currently possible worldlines, seen from the near-omniscient superposition of the network.' (ibid.)

Positing an unevenly-distributed futurity, many of the components of our speculations as design futurescapers are already out there, in the wild. We visualise images of genetically-engineered bees, artificial clouds, and network cold-zones, and, as science-fictional novums, they seem plausible because so much of their technological and social underpinnings already exist, in however nascent a form. For this, futurist Jamais Cascio uses the phrase 'plausibly surreal', while Steven Johnson talks of the 'adjacent possible': a phrase which 'captures both the limits and the creative potential of change and innovation.' (Johnson, 2010: 31) Regardless of the terminology, design futurescaping is a practice that has been enabled by the increasing visibility of these weak signals and early warnings in an information-drenched network culture.

Fig. 3: The visualisation of 'Acres Green', a sustainable augmented ecosystem.

Fig. 4: Synthetic Bees recreated through rapid prototyping techniques, as 'objects' within networked futurescapes.

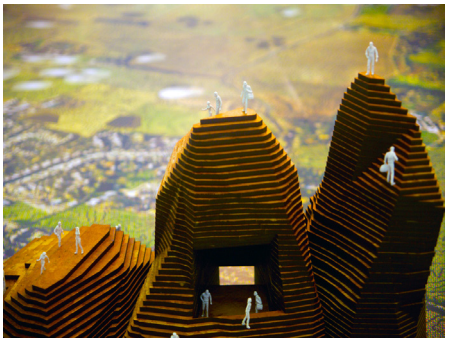


Fig. 5: 'Fake Mountains' created using CNC machines, again used as 'objects' within networked futurescapes.


Fig. 6: Billboards generated to create 'evidences' of a potential future, also considered as an 'object' within networked futurescapes, project 'Little Brinkland'.

## Futurescaping as Montage

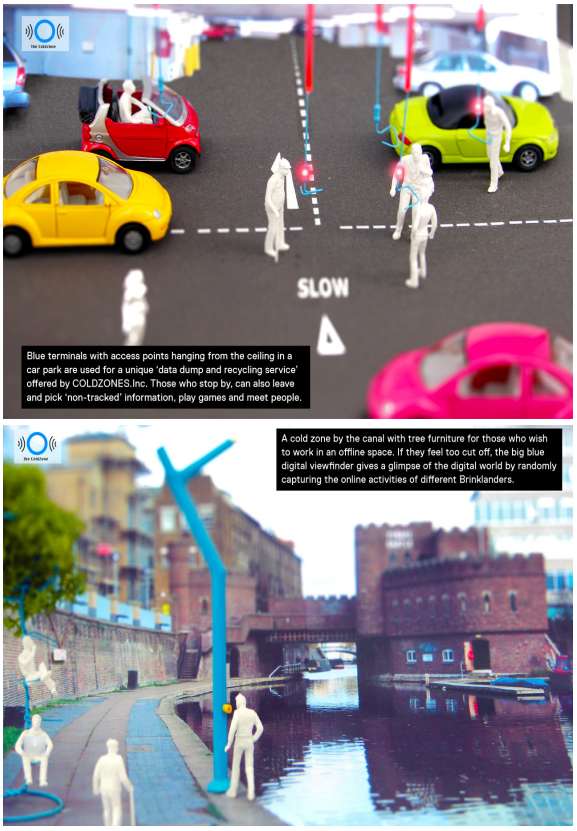
In its portrayals of the future, science fiction literature – and film – has fallen too easily into the safe tropes of utopia and dystopia, while our lived experience tends towards the ambiguous and the mundane. Design futurescaping faces the unique challenge of reconciling the need to reflect the mundane with the possibilities and potentialities of the coming decades. In both aesthetics and methodology, then, we

have embraced montage, combining multiple viewpoints, media, and modes of presentation in its quest to bridge what Jameson describes as 'the incommensurability between an individual witness … and the collective', with an incomplete expression of 'the absent, unrepresentable totality' (Jameson, 1992: 10).

As Lebbeus Woods comments, montage is a rarely-used weapon in the armoury of twenty-first century design, noting, in particular, that:

> 'we have not seen much use of photomontage as a design tool since the work of the Russian Constructivists, the Bauhaus and, somewhat more recently, Archigram. It has the immediate advantage of employing the familiar and, by selection and rearrangement, transforming it into the new. At the very least, this enables us to see new potential in the existing and obviates the need to begin – in the usual utopian sense – from scratch.' (Woods, 2010)

If, as Stross comments, '[t]he outward shape of the future contains the present and the past, embedded within it like flies in amber' (Stross, 2011), Woods is right: there should be no need to start from scratch. In fact, design futurescaping should resist the call of the 'clean break', recognising the value of history, context, and the specificity of the local. By combining fragments of past, present, and future, we arrive at a world-image that stands, broadly contiguous, with our current time.




Figs. 7, 8: 'Cold Zones' in the project Little Brinkland were created using different montage techniques.

Again, in more activist terms, the techniques of montage are cheap, quick and accessible, allowing participants from the grassroots to easily engineer what Soviet director Sergei Eisenstein described as a 'break in the perception of something outside the logic of the ordinary [through which] a restructuring of ordinary perception takes place' (Eisenstein, 1976). In our design futurescaping projects, we have made exten-

sive use of such techniques, combining video sketches, graphic mock-ups, physical artefacts and design fictions to hint at a greater totality, engendering the cognitive estrangement that allows participants and publics to encounter their world anew.

Fig. 9: Similarly montage techniques were created collaboratively by participants for the project 'Power of 8'

## Futurescaping for Public Engagement

Finally, we must discuss the role of design futurescaping as a form of public engagement. In our futurescaping projects at Superflux, we have strived to engage diverse stakeholders, embedding consultations and co-creation directly into the structure of our design process. Some examples of the design methodologies we have used to foster public engagement include the collaborative annotation of poster templates, physical prototyping in Lego and fibreboard, and the solicitation of comments, suggestions and responses through social media. In this way, design futurescaping relies on a willingness to work, to some extent, in the public eye. As Sloan comments, '[w]orking in public … can be a lot of fun, … but more than that: it can be a powerful public good.' (Sloan, 2011)

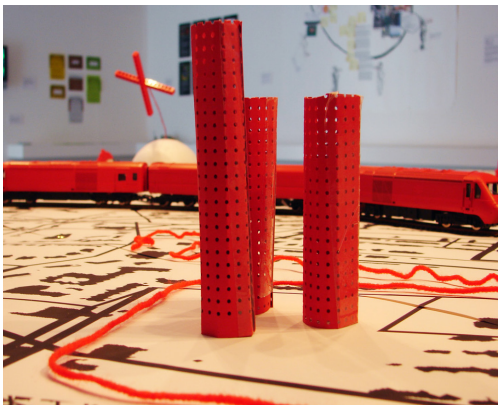
In addition to the engagement tactics embedded in our process, we also try to lever the outputs of design futurescaping for public discourse and education. Individual artefacts and design fictions provide anchors for the futurescape; catalysts for public discourse and debate. Necessarily speculative, at a semiotic level, they operate through connotation, mobilising a web of links, topics, and associations. In this way, they act, first, at the level of the tangible, showcased in exhibitions and events, later experiencing a mediated afterlife in digital archives, websites, and social media.

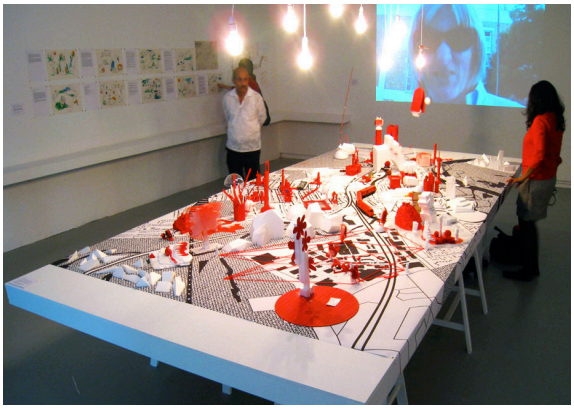
Commenting on recent shifts in discourses around the public understanding of science, Gregory and Miller are quick to note that, for much of the twentieth-century, the general public had:

'had to marvel at such wonders of science as they were allowed to behold, to be grateful for the benefits scientific advances brought to society, and to be just a little frightened of scientific knowledge – at least frightened enough not to meddle or to voice their uninformed opinions on scientific matters. From time to time, to make sure things did not get out of hand, the fears of the public would be assuaged by the reassuring figure of the expert, who did know enough to probe the innermost secrets of animate and inanimate nature.' (Gregory and Miller, 2000: 1)

Our design futurescaping projects at Superflux can be broadly located within the cultural shift away from this top-down model of authoritative knowledge and techno-scientific expertise. Placing a strong emphasis on the power and emancipatory politics of DIY futures, open toolkits, collaborative methods, and 'maker culture', we try to project forward from extant trends, technologies and processes, devising believable prototypes, images and media to engage the public in a direct and stimulating way.

Fig. 10, 11, 12: Public engagement also involved collaborative making and building, project 'Power of 8'.





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# Is this thing on?: identity, robots, and spying through everyday objects

BY ALEXANDRA DESCHAMPS-SONSINO

http://www.flickr.com/photos/library_of_congress/2332834605/

Last week, I found myself in the basement of a London pub listening to Alec Muffett speak about how to have an affair without being caught[1]. His conclusions were: don't use Skype, Twitter, Facebook, smartphones, play MMORPGs, send pictures or use work-related hardware. His advice on how to manage an extra-marital affair included: creating a disposable identity with a boring pseudonym, remembering your password in your head (don't write it down), using a cash-only pay-as-you-go phone, using voice-calls only, never leaving a voice message and wiping your SMSs regularly -- a bit 'Tinker Tailor Soldier Spy' in other words.

It's ironic that in an age where techno-enthusiasm is de rigueur, good old-fashioned spying techniques might become handy again in order to ensure an 'acceptable' state of privacy. As designers of modern technologies, devices, and services, we have to wonder if peace of mind becomes the ultimate cost of being 'modern', connected & available? Should we be designing with a benchmark of 'privacy is dead' or should we be re-examining ways of re-privatising our daily lives while still staying connected?

1 http://dropsafe.crypticide.com/article/5078

## iPhones, cows, robots & a natural disposition

Back to spying for a second. Being spied on or stalked no longer necessarily implies a strange man in a trench coat following you. One of its modern equivalents is when a system shares your location without your knowledge. In May 2011, security researchers discovered that the iPhone logs your location regularly[2] without giving users access or control of that functionality (turns out it was in the terms and conditions). Instead of fear-mongering, creative minds decided to play with this functionality. In an interesting test of memory, James Bridle, a London-based publisher and programmer, published a book[3] based on that data overlaid on top of OpenStreet Maps with annotations of past events he could recall. The iYou [4] project allows you to 'discover the stories saved in your pocket' – fear becomes opportunity in some hands.

Other responses to emerging functionalities of mobile devices have included turning off Bluetooth sharing and buying anti-skimming shields for your NFC-enabled devices. While we are allowed to protect ourselves from being tracked, for animals it's quite the opposite: we prefer to tag them if we can. We use RFID implants to track cows in herds[5], we tattoo mice[6] to keep track of them, and we track our cats with RFID[7]. This might be a simplified view, but one could argue technology has become a way of defining what makes us human and what doesn't. In this case, the 'other' needs to be kept in check, measured, and tracked to be more easily understood and controlled.

Another way in which we are refining this technological mirror is through the development of emotionally intelligent robots. A number of research projects including Lirec[8] are tasked with imagining ways in which robots can become more like us, more likeable, more lovable. The idea is if they are able to be like us, we might like them and interact with them (and thus technology at large) more easily. However avant-garde, this area of research mostly focuses on the design of robots that mimic

2 http://www.guardian.co.uk/technology/2011/apr/20/iphone-tracking-prompts-privacy-fears

3 http://booktwo.org/notebook/where-the-f-k-was-i/

4 http://www.iyou.nu

5 http://criticalmedia.uwaterloo.ca/teattweet

6 http://www.somarkinnovations.com/

7 http://nermal.org/projects/catalog/

8 http://links.net

the best in us, not the worst, which makes any resulting design inhuman by definition: likeable, perhaps, but inhuman. Humanity, it could be argued, is defined by our imperfections and unpredictability, not our ability to play chess perfectly.

Spying shouldn't be confused with voyeurism, which we now indulge in aggressively. Reading someone's tweets, blogs, LiveJournal (remember that?) are all examples of a self-reflecting, self-publishing self-expressing culture that emerged only recently. Pioneers of this movement go back to the late 90s with webcam performers such as Jennifer Ringley of JenniCam and early online diarists like Justin Hall[9], and this progressed to fictional online diarists like Lonelygirl15 and the daily photo postings of Noah K[10]. Fast forward to 2011 and these cases have become almost banal, and it may even be thatwhat makes them significant is how long they lasted . The data narrative becomes almost more important than the acts themselves as it turns into digital theatre. In our information-saturated age, we are now so bored of others and their online over-sharing, we long for the past when we could still be shocked.

## Infrastructure and data as people

When the telephone was invented, it not only allowed us to communicate with each other more easily, it also allowed houses to be mapped; areas to be defined in terms of area codes; usage measured and charged. A gas bill now allows you to apply for mortgages, get a broadband connection and register for a bank account. If you had a home and a technological infrastructure running through it, you were someone, you existed in the system. Soon this will no longer apply. Landlines will be defunct, unless they can re-invent themselves as the ultimate 'internet of things' infrastructure for smart homes. Mobile phones will take over as our proof of identity, and social networking site usage will be monitored for security and health purposes. If you haven't posted something in  twelve hours, you might get a text message from your local emergency services. Your mortgage might be refused on the basis of what type of photos you posted on Facebook. Customs officials might start Googling people passing through to see their latest tweets.

Gaming (and therefore spying) happens when you know exactly how a system works and what its requirements are (thus the popularity of checking into a hotel under a fake name). This is trickier to do now. What sorts of devices will protect me? How will

9 http://www.sayeverything.com/excerpt/say-everything-chapter-one/

10 http://everyday.noahkalina.com/

my status and the objects around me tell the story I want them to tell as opposed to rat on me? If objects are to have agency, surely it should be as malleable as I want it to be. How will I cheat in such a world? Will I get a new phone with cleaned-up data? Will my online history be hoovered up to increase my credit rating? Will my Fitbit account be cleaned up before an interview to avoid incriminating activity[11] showing up? What new devices will I use to pretend I am exercising for my health insurance? We have to assume some of this is already happening in high-profile litigation cases.

A broader question here is also: how much technology & data do we need to assume someone is using a system? If we strapped an unlocked iPhone to a cat and had that phone generate politically ambiguous messages to a fake Twitter account when the cat jumps, could the cat be sent to prison? What if there is no cat? Weavrs[12] is a start-up that creates online personas that are generated algorithmically and have Twitter accounts that real people follow.  24% of Twitter accounts created are automated bots.[13]

## The politics of infrastructure

The Iran elections of 2010, the Arab Spring and the London riots of 2011 expose a tension between a community of people using tools that help them exercise freedom of expression and the government's inability to understand or control these platforms when the message isn't the one they want to hear.

In 2010, the U.S. State Department reached out to Twitter and asked them to delay a network upgrade that was scheduled to protect the interests of Iranians using the service to protest the presidential election that took place the next day[14]. Facebook & Twitter were faced with some criticism as having been key to the Arab Spring[15]. In August 2011, the UK government asked RIM to hand over some BlackBerry Messenger data from the period of the London riots. A number of politicians, media commentators and members of the police force suggested that Twitter and BlackBerry

11 http://techcrunch.com/2011/07/03/sexual-activity-tracked-by-fitbit-shows-up-in-google-search-results/

12 http://www.weavrs.com/static/about.html

13 http://mashable.com/2009/08/06/twitter-bots/

14 http://www.time.com/time/world/article/0,8599,1905125,00.html

15 http://www.guardian.co.uk/commentisfree/2011/mar/07/facebook-twitter-revolutionaries-cyber-utopians

Messenger in particular, had an active role to play[16]. These 3 cases highlight how difficult it is to isolate the tools from politics. When a builder makes a house that crumbles, no one would look to the providers of the hammer and nails. Can we build devices and objects that help us say 'my ideas are not my tools'. Can robots protest for us? Can our identity be protected while still staying involved?

## With and without

In this highly political, data-rich connected world, where is the space for new objects? If we look back, we might learn about the power of objects and their implied social affordances. The original Walkman had 2 jacks for headphones, implying a shared experience. This disappeared quickly after Sony realized they could sell more Walkmans by removing that feature. Enabling physical shared access to technology has mostly been replaced by wi-fi and 3G communication but if you had something to share physically, how would you do it now?


http://blog.phonografic.com/wp-content/uploads/walkman_sony_tps_l2_phonografic1.jpeg

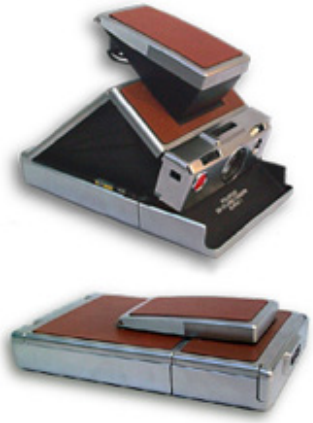
During the Cold war, Russian military phones didn't have a dial, as you weren't the one making calls. You were simply being called. Power was expressed by absence of interface. What else could you eliminate to imply status?

http://www.foreignpolicy.com/articles/2011/08/25/agitprops?page=0,1

16 http://www.bbc.co.uk/news/technology-14442203

Matali Crasset's 'When Jim Came to Paris' is modern even 15 years later. A mattress, an alarm clock, a light: the essentials of a nomadic life. What else would we add now? An anonymous 'Twitter box'?

The Eames SX-70 Polaroid camera folds up to look like an over-sized lighter. There is very little to indicate how to open the device unless you read the instructions. In a world where instruction manuals are seen as antiquated, how can we still surprise and create a tension?



The same applies to Fuse's design of the One Laptop per Child. It's fascinating to watch as people struggle to open it for the first time.[17]

It isn't so much that these objects might deceive, but it's the unexpected outcomes and tangible experiences that a user might encounter that become powerful. These

17 http://www.youtube.com/watch?v=PTcpkRYXDAU (4:26 mns)

examples might help us think about the levels of deceit we can create with objects and how we could protect our stories, our interests and ourselves in times of technological turmoil. If these objects encounter new technologies, how do they react? How should we?

By looking at how we coerce technologies to suit our ideals and beliefs, how we manipulate data, and how we design objects, we may be inspired to create systems, services, and objects where we create ambiguity and mystery -- and ultimately, preserve our humanity.

# Writings on the Internet of Things

BY ROB VAN KRANENBURG

Making sense is the ability to read data as data and not noise. It is a matter of life and death when dealing with the flowing reality of the earth's core: 'If we consider that the oceanic crust on which the continents are embedded is constantly being created and destroyed (by solidification and remelting) and that even continental crust is under constant erosion so that its materials are recycled into the ocean, the rocks and mountains that define the most stable and durable traits of our reality would merely represent a local slowing down of this flowing reality.' (Manuel de Landa, 1997)

Reading this local slowing down of flowing reality has never been easy, in fact it has never been possible. There was no way of reading information in the data drawn by the patterns of the seismographs. Vulcanologists could, but read in particular ways that refused to turn data into reliable information. Until Bernard Chouet, a physicist – after five years of intensive study – saw patterns where no one saw patterns before, decided what was data and what was not data.[1] He focused on a particular pattern that no one had seen before.

The challenge we are facing now is reading the flowing reality of our surface. How to store real-time information flows? How to chart them? Which are our seismographs? How do we match real-time processes with the signified that they are supposed to signify? How to find ways of deciding what is data and what is not data in the space of flows?

When Cook's 'Endeavour' sailed into the bay that we know now as Cape Everard on April 22 1770, touching upon the Australian shore for the first time, the British saw Aborigines fishing in small canoes. Whereas the native population of Tahiti had responded with loud chanting and the Maori had thrown stones, the Aborigines, neither afraid nor curious, simply went on fishing.

1 From the BBC documentary, Volcano Hell: "Chouet's methods have commanded wide respect and have been increasingly used around the world. In a dramatic demonstration last year Mexican scientists used Chouet's method to predict an eruption of the mighty volcano Popocatépetl. Tens of thousands of people were safely evacuated just before the biggest eruption of the volcano for a thousand years. No one was hurt."
< http://www.bbc.co.uk/science/horizon/2001/volcanohell.shtml >

Only until Cook had lowered a small boat and a small party rowed to the shore did the Aborigines react. A number of men rowing a small boat signified a raid and they responded accordingly. The Aborigines must have seen something and even if they could not see it as a ship, they must have felt the waves it produced in their canoes. However, as its form and height was so alien, so contrary to any-thing they had ever observed or produced, they chose to ignore it since they had no adequate procedures of response. In Dreamtime, the Aborigines believed they saw an island. And as islands are common, you can let them drift by, you don't notice them, you don't perceive them as data. They thought Cook's boat was an island.

When you see an island you do not have to look up.

It will pass.

We find ourselves today in a similar situation.

Our Endeavour is the merging of digital and analogue connectivity as described by Mark Weiser in his 1991 text The Computer in the 21st Century and Eberhardt's and Gershenfeld's announcement in February 1999 that the Radio Frequency Tag had dropped under the cost of a penny. For most common people the ubiquitous computing revolution is too fundamental to be easily perceived.  But it will change the way that companies such as British supermarket chain Tesco does business. Tesco's UK IT director Colin Cobain says that RFID tags will be used on 'lots of products' within five years - and perhaps sooner for higher value goods; 'RFID will help us understand more about our products', he claims.[2] Some professionals believe that what we call ubiquitous computing will gradually emerge as the dominant mode of computer access over the next twenty years. Intriguingly, it is Mark Weiser who believed 'that ubiquitous computing will enable nothing fundamentally new, but by making everything faster and easier to do, with less strain and mental gymnastics, it will transform what is apparently possible.' [3]

Contrary to Mark Weiser's claim that ubiquitous computing will enable nothing fundamentally new, I believe that ubiquitous computing will enable something fundamentally new, and my main question is: to what extent is does it allow for analogue human agency?

2 Shops reveal plans to replace barcodes, by Steve Ranger [04-09-2002]

3 Mark Weiser, 'The Computer for the Twenty-First Century," Scientific American, pp. 94-10, September 1991

The Disappearing Computer[4], launched by Future and Emerging Technologies, part of the European Commission's IST Programme, is a vision of the future: 'in which our everyday world of objects and places become 'infused' and 'augmented' with information processing. In this vision, computing, information processing, and computers disappear into the background, and take on the role more similar to that of electricity today - an invisible, pervasive medium distributed on our real world.'

In such a mediated environment – where everything is connected to everything – it is no longer clear what is being mediated, and what mediates. Design decisions become process decisions in a mediatized environment. Environments such as your kitchen, your living-room, our shopping malls, the streets of old villages, websites, schools, p2p networks, are new beginnings as they reformulate our sense of ourselves in places, in spaces, in time.

The goal of the Disappearing Computer project is augmenting the world of everyday objects and places with information processing while at the same time exploiting the affordances of real objects in the real world. Dr. Norbert Streitz, one of the key figures in the network, explains that this requires 'an integrated design of real and virtual worlds and - taking the best of both - developing hybrid worlds with matching metaphors." The disappearing computer can, according to him, be thought of as genius loci, the spirit of the place. As 'nature' and 'techné' become hybrid spheres, people become 'tags'. Ghosts.

4 http://www.disappearing-computer.net/
Originally printed in: Real Rules of Innovation for the 21st Century (Part 1) Inspiration Materials
http://www.noemalab.org/sections/ideas/ideas_articles/kranenburg_rules_of_innova.html

# Design Fiction

BY JULIAN BLEECKER

Design, like architecture, is an aspirational endeavor. These are practices that make things, which is to say that it is their essential character to transform ideas into material. 'Pouring concrete' is an instructive metaphor for architecture to describe the ritual of translating ideas and principles into a more durable state. In that translation, with all of its complexities and its imbroglios of conflicting and competing tensions – comes the formation of structures that define how space is occupied and moved through. Whether inhabitable space or space marked for transitions and flows, architecture, much like design has the imminent challenge of closing the gap between a vision and its expression as a formed, material object.

But there is the pragmatic constraint – it is plainly difficult to construct ideas at the scale in which architecture is expected to operate, especially if the ideas are speculative and visionary. As a result architects spend quite a bit of time communicating their ideas. In fact, we might say that architects spends most of their efforts making props that tell stories about a re-imagined world, or stories that compel us to reflect on the present state of the world. Architects might be the best storytellers in this way, so concentrated are their efforts at finding compelling ways to express their ideas, perhaps knowing full-well that they will not ever be realized to scale. Those props might be sophisticated scale models or technically rich visualizations and renderings. In any case they are materializations for which one does not have to 'pour concrete.'

The genre of science-fiction has a similar remit – to re-imagine, reflect and refract the present state of things through stories. To a greater or lesser degree, science-fiction has its descriptive story props that help communicate the contours and conduits of these re-imagined worlds. It may be the one of a few literary genres that is expected to deliberate in this way.

What might we call design and architecture if we think of these practices as genres of story telling, similar to science-fiction? If they re-imagine the world more than incrementally, but more along the lines of speculative or even radical shifts in the way things are? Or even if the change seems slight, with a small shift in the contours of life as it is lived – that change forces one to reflect on present conditions, as the best of science-fiction is able to do. Design like architecture would be the practice that creates materi-

alizations of ideas in the form of props that start conversations and help re-imagine the world.

## Architecture Fiction / Design Fiction

01

**If design can be a way of creating material objects that help tell a story what kind of stories would it tell and in what style or genre?** Might it be a kind of half-way between fact and fiction? Telling stories that appear real and legible, yet that are also speculating and extrapolating, or offering some sort of reflection on how things are, and how they might become something else?

Design fiction as I am discussing it here is a conflation of design, science fact, and science fiction. It is a amalgamation of practices that together bends the expectations as to what each does on its own and ties them together into something new. It is a way of materializing ideas and speculations without the pragmatic curtailing that often happens when dead weights are fastened to the imagination.

Design Fiction is a different genre of design. Not realism, but a genre that is forward looking, beyond incremental and makes an effort to explore new kinds of social interaction rituals. As much as science fact tells you what is and is not possible, design fiction understands constraints differently. Design fiction is about creative provocation, raising questions, innovation beyond the 'up-and-to-the-right' sort, and exploration.

Design fiction works in the space between the arrogance of science fact, and the seriously playful imaginary of science fiction, making things that are both real and fake, but aware of the irony of the muddle – even claiming it as an advantage. It's a design practice, first of all – because it makes no authority claims on the world, has no special stake in canonical truth; because it can work comfortably with the vernacular and pragmatic; because it has as part of its vocabulary the word 'people' (not 'users') and all that implies; because it can operate with wit and paradox and a critical stance. It assumes nothing about the future, except that there can be simultaneous futures, and multiple futures, and simultaneous-multiple futures – even an end to everything.

04

There's a scene in the film **Minority Report**, which also happens to be a wonderful prototype of a ubiquitous computing future, in which Tom Cruise's character Inspector John Anderton manipulates a database of sound and images that are from the near future. In this scene, which just about everyone in the world knows about, Cruise's character makes orchestra conductor- like gestures, summoning and juxtaposing fuzzy snippets of what is almost about to happen. It's all happening in a mad-dash effort to piece together a puzzle. The puzzle is, of course, unlocking the mystery of a murder we know will take place, unless the clues of its location and perpetrator are discovered.

The example I bring up here is, of course, the gesture interface that Anderton uses to piece together the clue fragments for the future murder he is investigating. As a film element, it has a well-balanced mix of visual dynamics that will keep today's science fiction film audience riveted, and legible interaction rituals that allow the audience to follow the gestures closely to develop an understanding of precisely what is going on – what is being manipulated and how bits of clue are juxtaposed and re-arranged as one might do so with a puzzle. Special attention is placed on the precision of the gestures that Anderton uses in order to manipulate the fragments of video and sound – zooming in on a bit of imagery with hand-over-hand gesture; deleting a few things by moving them with a forceful and dismissive sweep into this interface's version of today's user interface trash can.

There's more than the clue-construction device that Anderton uses – whatever its called. It would be a simple matter to show a few still images from this sequence as an index to the small bit of argument I'm presenting. But, it is precisely this longer bit of story that I want to highlight, and not just the instrumental technology. Not the story itself – the pre-murder. Rather, I want to highlight what the story does so as to fill out the meaning of the clue-construction device, to make it something legible despite its foreignness. It's a device used to edit sound and images somehow extracted from the future. It's as if the story is sharing with the audience, who may be reasonably wondering – **how do you edit and manipulate fragments of sound and images from the future? How does police evidence gathering work in the year 2054, when evidence is things that have not yet happened – but will? Do they travel into the future through some device and collect things that they bring back? Do detectives still use little baggies and tweezers to collect scraps of bone fragment, sending them to clever forensic scientists back at the lab?**

Science-fact and science-fiction are entangled in the **Minority Report** drama, which isn't a bad thing. In fact, it should happen more. Science-fiction has way more imagination than science-fact and almost certainly circulates knowledge – wherever between fact and fiction that knowledge may live – and ideas more effectively than all the science journals and science journalism in the world.

In the production of **Minority Report**, the idea for such a gestural interface came from somewhere and at least in part from the film's technical consultant, John Underkoffler. Underkoffler was a member of the Tangible Media Group at M.I.T., and had participated along with a panel of luminaries in providing some speculations as to what the future of **Minority Report** might be experienced based on their insights and their extrapolations of the current trends in the technology world. What was needed were some futurist-style projections to help trace a vector from the speculations of the present to their materialization in the future of 2054, when the film takes place.

From a project at the Tangible Media Group called 'The Luminous Room' were a number of 'immersive' computing concepts that were drawn from some of the principles of Ubicomp. The principles are related to the idea that computers might become more directly integrated into the architecture of the environments that people occupy. Rather than manipulating them with a keyboard and mouse, people might use gestures for direct input.

Translating laboratory principles into a dramatic film allows for the lab ideas to circulate in a bold fashion, beyond what would be accepted in the typical, conservative research-academic-industrial context. There is a larger military-industrial-light-and-magic complex in effect here, which is precisely the larger, messy tangle through which fact and fiction become indistinguishable through a blend of science and entertainment. The action is a kind of science fact-fiction work that effectively tries out some ideas within a film's narrative. It's sort of like prototyping – sketching out possibilities by building things, wrapping them around a story and letting them play out as they might.

More formally, this is what David A. Kirby calls the 'diegetic prototype.' [David A. Kirby, 'Future is Now: Diegetic Prototypes and the Role of Popular Films in Generating Real-World Technological Development' forthcoming in Social Studies of Science, a journal.] It's a kind of technoscientific prototyping activity knotted to science fiction film production that emphasizes the circulation of knowledge and ideas. It is like a concept prototype, only with the added design fiction property of a story into which the prototype can play its part in a way different from a plain old demonstration. The

prototype enlivens the narrative, moving the story forward while at the same time subtly working through the details of itself.

> '..scientists and engineers can also create realistic filmic images of 'technological possibilities' with the intention of reducing anxiety and stimulating desire in audiences to see potential technologies become realities. For scientists and engineers, the best way to jump start technical development is to produce a working prototype. Working prototypes, however, are time consuming, expensive and require initial funds. I argue in this essay that for technical advisors cinematic depictions of future technologies are actually 'diegetic prototypes' that demonstrate to large public audiences a technology's need, benevolence, and viability. Diegetic prototypes have a major rhetorical advantage even over true prototypes: in the diegesis these technologies exist as 'real' objects that function properly and which people actually use.' [Kirby]

The film becomes an opportunity to create a vision of the future but, perhaps more importantly, to share that vision to a large public audience. In specific cases, such as the evocative 'gesture interface' concepts Underkoffler introduced into the film's story and its production design, ideas gather a kind of knowledge-mass. They become culturally legible and gain weight and currency. We 'get' the idea of using conductor-like gestures to interact with our information technology because it is given to us through the film, it's pre-science, the discussions that evolve in media and with friends, the formation of companies to further develop the ideas, bolstered on the cultural literacy with touch and gesture interactions, and so on. To gain cultural legibility takes more than a scientist demonstrating an idea in a laboratory. What is needed is a broader, context — such as one that great storytellers and great filmmakers can put together into a popular film, with an engaging narrative and some cool gear.

The follow-on to this science fiction film introduction of gesture interfaces to a large public audience are more gesture interfaces, each one staking out **Minority Report** as a point of conception, either explicitly or implicitly. It's as if **Minority Report** serves as the conditions of possibility for more and further explorations of the possibility for gesture interaction — whether touchbased gestures, as in the Apple iPhone and other techniques, or free-space and tracking gesture interactions, like the Nintendo Wii, for example. This is not precisely the case: we are not interested in claims as to priority, ownership and who did what first. What is much more interesting is the brocade of activity that weaves in and through the fictional/factual special effects props of **Minority Report**.

# Speculation and Extrapolation

AN EXCERPT FROM A LONGER TEXT BY ILONA GAYNOR

## Gateways, beyond the beyond

'If design can be a way of creating material objects that help tell a story what kind of stories would it tell and in what style or genre?'[1]

A designed artifact can connect an idea to its expression as a made, crafted, instantiated object. These material objects that have a form, texture a certain level of intensity that becomes real before themselves. They sit on a landscape of meaning that pre-exits them, because **'they could never exist outside of an imagined use of context, however mundane or vernacular that imagined context of social practices might be. Objects tell stories, even by themselves. In cinema they act as props or in design they act as conversation pieces that help speculate, reflect and imagine a world without the use for words.'**[2] They are items around which a narrative is weaved, and this helps us to imagine and plot out the details of the environment in which they are located. But they can also act as 'gateways' into other kinds of worlds: extrapolated tangents, parallels and instances that exist beyond the immediate experience of the narrative, giving us a dense picture about where the ideas and themes originated and of course where they cross over at points of familiarity with our own world.

Of course hyper detailed and referential mise-en-scene is an investment and could be argued that it is partly a result of a release 'new' technologies such as DVD and Blue Ray. Digital special effects make it relatively 'simple' to produce microscopic, intensively overlaid, hybrid and hyper real environments. It could be said that there is a certain level of assumption made by the viewer to expect a high standard of detail that will result in repeated and sometimes highly selective viewings, which will scrutinize and enjoy detail that would normally be missed in a theatrical viewing.

1 Bleecker, Julian, Design Fiction: a short essay on design, science, fact and fiction, Near Future Laboratories, March 2009, P1

2 Bleecker, Julian, Design Fiction: a short essay on design, science, fact and fiction, Near Future Laboratories, March 2009, P1

There are four main strands where these existential gateways come into reflection.

## 1.0 – Product placement

'Product placement is a form of advertising, where branded goods or services are placed in a context usually devoid of ads, such as movies, the story line of television shows, or news programs. The product placement is often not disclosed at the time that the good or service is featured.'[3]

Product placement still exists and is a 'successful' tool for communicating brands within a consumer-generated framework. Most film critics would state that product placement is **'absurd'** and **'putrefies the environment'**[4] David Lynch goes as far to say when asked his opinion about the subject **'Bullshit. That's how I feel, total fucking bullshit... what kind of world is this?'**[5] It is fair to say that the bottom line intention from advertising is to make money and if spending big budgets on film funding in order to get a product in front of the eyes of attentive viewers, so be it. However it could be argued that products (in some instances) allow us to tell more compelling 'believable' stories by reflecting the world and western culture we live in, through including its most dominant brands. It allows us to enter the cinematic world presented before us and find comfort in being surrounded by familiar artifacts and brands that work their way into our daily lives. However by 'anchoring' a brand into a film, we become more familiar with the world pervasive branding, which arguably therefore works to constrain what can be done in regards to the production and freedom of the film.

HBO's Sex and the City is publicized for use of its product placement, referred to as 'the **"Film Whore"** who **"sold out"** for marketing'[6] and is often shunned for doing so, brands included: Mercedes-Benz, Coty fragrances and Sky vodka, as well as the jeweler H Stern; Glaceau Vitamin Water, Coca-Cola, Starbucks (see Illus) and Bag Borrow and Steal. However it could be argued that Sex and the City is **'built on a foundation**

3 Wikipedia definition, <http://en.wikipedia.org/wiki/Product_placement> date accessed (28.09.10)

4 Lynch, David. In conversation on product placement,AFI Dallas Film Festival, (date unknown) <http://www.youtube.com/watch?v=F4wh_mc8hRE> date accessed (23.09.10)

5 Lynch, David. In conversation on product placement,AFI Dallas Film Festival, (date unknown) <http://www.youtube.com/watch?v=F4wh_mc8hRE> date accessed (23.09.10)

6 'Sex and the City' top movie for product placement' (Aug 2008)

**of material goods'**[7] after all here exists a world, which is described as 'socialite Manhattan' where glamorous women live to work, socialize and spend. Where else would Carrie Bradshaw (Sarah Jessica Parker) be drinking her $5 cup of coffee?

Fig. 7 - Sex and the City 'the movie', dir: Michael Patrick King (2008) – Carrie Bradshaw drinks coffee at Starbucks

In Robert Zemekis's Forrest Gump (1994) Forrest (Tom Hanks) takes a large sum of his hard earned fortune and invests it in what he refers to as some **'sorta fruit company'**[8] this is ironic, in the sense that the company he invests in is Apple Computers Inc (see illus) At the time of films release in 1994, Apple was no-where near the 'power house brand' it is today, the logo on the document (Fig. 8) is still the colourful striped logo of which apple didn't change until 1998. In a fictional space, we could imagine Forrest Gump's **Bubba Gump Shrimp Corporation** fortune being responsible for the growth of the worlds' most powerful computer household name. But we can only dream and speculate in and beyond the world that is Forrest Gump.

7 You Talk Marcketing <http://www.utalkmarketing.com/pages/Article.aspx?ArticleID=11436&Title=%E2%80%98Sex_and_the_City%E2%80%99_top_movie_for_product_placement> date accessed (18.09.10)

8 Gump, Forrest, dir: Robert Zemekis , Forrest Gump (1994)

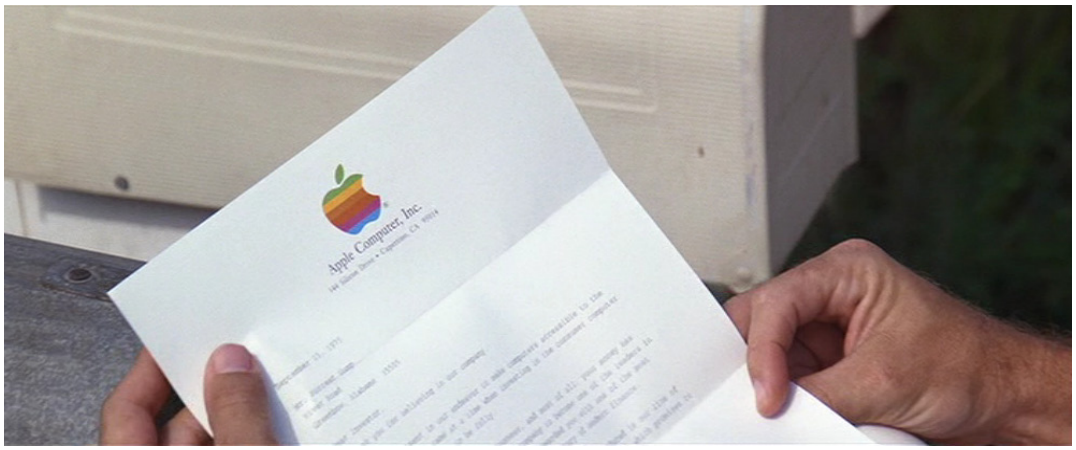



Fig. 8 - Forrest Gump, dir: Robert Zemekis (1994) – Forrest invests in a 'fruit company' Apple Computer Inc

What's interesting in this instance is the use of product placement. The form of brand recognition is weaved peacefully into the narrative without being placed strictly there to sell. The strategy is sophisticated enough not to make us as an audience be consciously aware of it. The other brands that feature are Bubba Gump Shrimp, Dr Pepper, Pepsi and Fred Perry. **Forrest Gump** is a film often cited as being 'post modern', the brands that are used in the film act as artifacts to signify milestones and frame significant, historical reference points, by using visual effects it allows the 'hero' Forrest to be inserted into a 'real' US chronological history, to which the audience can associate instances with, such as shaking hands with John F. Kennedy. Cross pollinating the 'real' world that we know with a parallel fictional reality in which character Forrest is perpetually colliding with and shaping throughout his 'fictional' journey to find his destiny.

## 1.2 – Extrapolating the 'real' and 'fictional' product placement

Extrapolation is a term, which could be used describe how we could reinforce 'authenticity' in a fictional environment. When real products sit in a world that's place in time, either pre-exists us or sits in a distant future. It could be described as a halfway between fact and fiction, they could be seen as speculations on what the next 'now' will be like, always remembering that 'no possible future is out of the question.'[9]

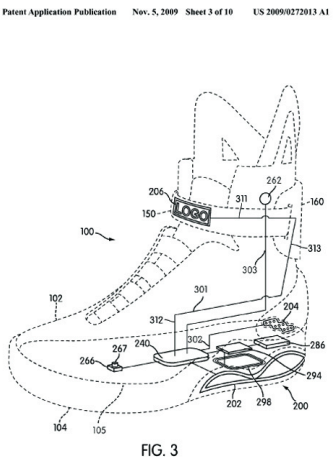
A key example of this can be seen in the film **Back to the Future II** (1989), set in the

9 Bleecker, Julian, Design Fiction: a short essay on design, science, fact and fiction, Near Future Laboratories, March 2009, P21

year 2015, Dr Emit Brown (Christopher Lloyd) hands Marty (Michael J. Fox) a pair of 'power assisted self lacing' Nike sneakers (Fig. 9), a technologically more advanced version of Nike 'Air Force Ones', in order for him to **'blend in to the future'**[10] so that natives won't notice he's from the 'past' and become suspicious of the possibility of time travel. For years I have questioned whether Nike actually contributed to the design of these shoes and their function, or whether they were art directed by Zemekis specifically for the film and sponsored by Nike, but in 2009 Nike released a patent (Fig. 10), for 'power assisted self-lacing shoes' and the carry case in which they are to be packaged in, which is a direct replica of the black and green unscrewing cylinder as seen in the film.


Fig. 9 - Back to the Future II, dir: Robert Zemekis (1989) – Marty McFly - Nike 'power assisted self lacing' sneakers

Fig. 10 - Patent application document - 'Fig. 3' – Nike Inc (2009)




I don't think it was intentional for Nike to test a 'new' product in front of a cinema audience, and from what I've read I can't find any evidence to suggest this. However it becomes easy to imagine a future where companies will go through a similar process for market research, **Back to the Future** being unintentional, but if a company

10 Brown, Dr. Emmit , dir: Robert Zemekis, Back to the Future II (1989)

as powerful as Nike placing a 'speculative' product in front of audiences to discover 20 years later that there is a market place for such an item then we begin to see an emergence of product placement that hits a new strategic level all together. Here is what the future could hold, and is it desirable or not?

What also becomes apparent throughout the film, is the strange trajectories in reference to product design, in 2015 it speculates that objects will inevitably get smaller, all except for radios, which could be a commentary about the popularity at the time (1980's) of 'boom boxes', which now seems somewhat incomprehensible. Marty also visits **The Café 80's**, an artifact in itself that preexisted (at the time) its own pastiche, putting the audience in a mode of self-reflection, one that reflected the 'current' decade within which the film was released (1989).

Back to the Future fans still await the release of the **Hover Board**. Fictional Brands can also play an equally significant role regarding the quest to find authenticity. They can be a powerful tool, in relation to crossing the border between fiction and non-fiction, for example: Who designs them? How can a brand be established for a fictional product? Who is the target audience? How might the brand strategically change throughout its lifespan? How will its' products extrapolate into the future? Or do these questions really matter?

In Spielberg's **Jurassic Park (1993)** a group of scientists are invited to visit an island off the coast of Costa Rica, where they find themselves being taken on a tour of a new 'theme' park called **Jurassic Park** before the official launch of the park opens its' doors to the public. They are greeted by the parks owner John Hammond (Richard Attenborough) who consequently realises the implications of what he imagined to be the utopian theme park of the future turns about to be a deadly misguided mistake. The iconography and realisation of this 'mistake' throughout the film is subtly depicted through the brand of the park from the way-finding signage, designs of the vehicles, architecture and merchandise that haunts the empty gift shops. It could be argued that the Jurassic Park 'brand' exploits a certain cynicism about the packaging of it's experience and is maybe a reflection on **Disney's** theme park 'experience'. Ironically the Jurassic Park 'brand' subsequently went on to accompany a large range of promotional product merchandise; from plastic toy dinosaurs to children's lunchboxes (I owned one as a child), items of which we have already encountered, whilst in the fictional gift shop seen in the film. (Fig. 11)


Fig. 11 - Jurassic Park, dir: Steven Spielberg (1993) the fictional gift shop

As the narrative unfolds the more we see the shiny, once great utopian Disney like vision of **'the worlds greatest theme park'** crumble into traces of a dream destroyed by the nature of it's own greed, as we see in the final iconic shot of the T-Rex roaring amongst piles of shattered bone rubble, a plastic banner suspended from the ceiling falls into the shot (Fig. 12) that reads **'when dinosaurs ruled the earth.'** It doesn't matter that the brand is fictitious, as an audience we associate the brand with a vision for growth, wealth and loyalty something we can all relate too with the brands that we encounter in our everyday lives.

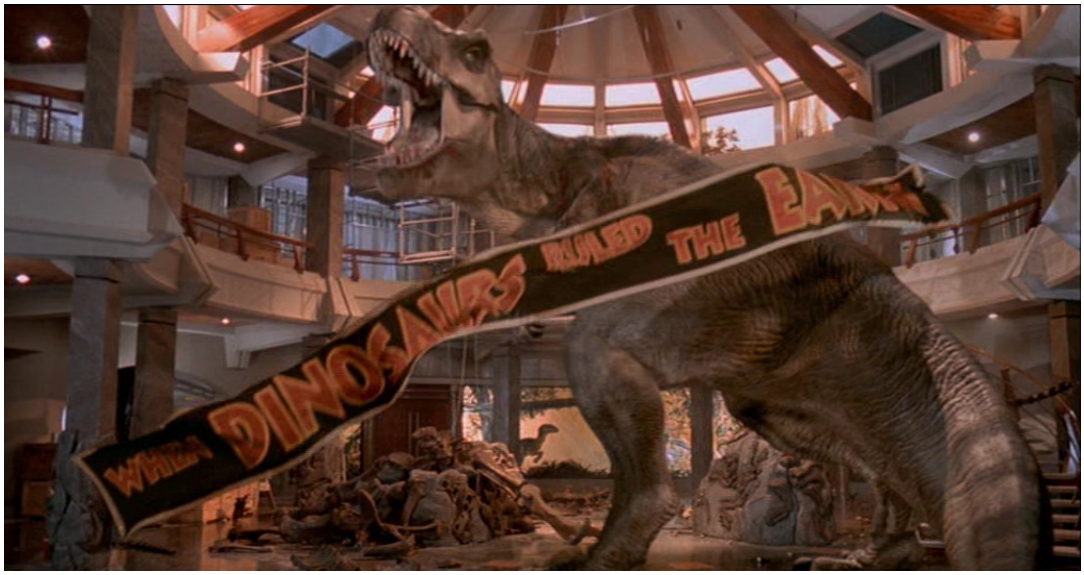



Fig. 12 - Jurassic Park, dir: Steven Spielberg (1993) – 'when dinosaurs ruled the earth'

Unlike the use of brand in **Jurassic Park** Quentin Tarantino uses a fictitious brand called 'Red Apple' the fictional tobacco brand that are heavily smoked and propagated throughout his written works as well as his film works, more notably in **Pulp Fiction** (Fig. 13) and **Kill Bill**. However there has never been a publicised reason why he chose to cultivate and design this brand, its not prominent or relevant to the narrative unlike **Jurassic Park**, we can only speculate that it makes a counter reference to much larger corporations such as Marlboro, In particular Marlboro Reds – we could argue that this reference could be construed as Tarantino mocking product placement, possibly connoting product placement as the 'Forbidden Fruit', by placing his own fictitious products within his own films. Although paradoxically, small fanatic fringes are beginning to roll out Red Apple merchandise, from ashtrays and baseball caps to a whole line of fake cigarettes. Presenting consumers with the possibility of meeting Tarantino's world of fiction with our reality.

Fig. 13 - Pulp Fiction, dir: Quentin Tarantino (2001) – Mia Wallace smokes 'Red Apple' Cigarettes

## 1.3 – The Unassociable

Sometimes we can't necessarily associate the fictitious with our reality, especially when we talk about worlds that are unfamiliar to us and don't exist entirely. But there's a distinct intensity that arises when an, 'unfamiliar' object, technological or not is put before us in a fictional space and therefore can be imagined in a real space. It becomes difficult to examine a culture of a place or time, when we have no reference of which to gage meanings with our surroundings. It could argued that all fiction tries to create integrated imaginary worlds, but it is when we start to examine what materials exists within a 'world' that allows us to engage, excite and to associate conscious meaning, perhaps even drive us to pull the artifact out the fiction and

translate it to the real.

George Lucas is well versed in the language of material, in the film series **Star Wars** (1977) there was over 15,000 props designed and fabricated to propagate the authentic 'sci-fi' futuristic environment Lucas had envisioned. The most commonly known objects of which, was the 'Lightsaber.' **'The Lightsaber consists of a polished metal hilt which projects a blade of plasma that spans about one meter long'**[11] (Fig. 14) and was a weapon associated with a group of warriors referred to as the **'Jedi'**.

Fig. 14 - Star Wars 'A new hope', dir: George Lucas (1977) – Luke Skywalker uses a Lightsaber for the first time

Fig. 15 - The Lightsaber (film prop), Designed by George Lucas (1977) – featured in the Star Wars films

Firstly it's interesting, how detailed the form actually is (Fig. 15) (for a film prop), we can see glimmers of 70's industrial design; from the typically stainless steel shaft, boxy black Bakelite handle and button trimmings to the tight looped belt clip and

11 Wikipedia definition ' Lightsaber' , <http://en.wikipedia.org/wiki/Lightsaber> date accessed (16..09.10)

visible gold plated external circuit board details, despite the intended vision to be speculatively 'sci-fi' in appearance. The opening credits start with the words ' A long time ago…'[12] however the Lightsaber conjures a realm of sword, sorcery and 'swashbuckling' chivalry that could be considered a paradox in itself. Sci-fi objects continued to gravitate towards this aesthetic throughout the late 70's and early 80's and are 'now' considered an aesthetic sci-fi cliché made up of a recognizable family of objects such as 'ray guns' and 'death rays' that tend to be often, only referred to in efforts to construct pastiche or to fulfill the role of nostalgia that relates to 70's pop-culture.

We could also construe this as an early stirring of **'Steam Punk'** (Fig. 16) and it's visual culture – with its satisfyingly detailed ('gadgety') look and feel, with its knobs and controls, not the smooth 'Bang and Olufson' version that would (have been) a more accurate gesture towards 70's 'future modern'.

Fig. 16 - 'Cloud Goggles', characteristically Steam Punk in design (2009)

It could be argued that in fact the Lightsaber originated in the 50's and was inspiration taken from Isaac Asimov's novel **Foundation (1951)** Asimov mentions **'a penknife with a force-field blade'**[13] (that was described to snap on and off) which wouldn't be too far of a stretch onwards to imagine the notion of a sword like object with a 'force-field blade.' However if you **Google** 'Lightsaber' or 'force field blade' you will find millions of images (See Illust) of Lucas's (1977) version and various mimicking hybrids, polluting the whereabouts of origin even further, is the object from a past or a recognizable future?

12 Star Wars 'A new hope' dir: George Lucas, (1977)

13 Asimov, Issac, Foundation (Foundation Series) (1977) Collins, England (London), P48

Fig. 17 - Images taken from Google search engine, (04th Oct 2010) - (image search) – 'Lightsaber'

Curiously most of the images that surfaced (Fig. 17), depict scenes within in a domestic setting, often with children wielding some form of Lightsaber or images of the Lightsaber (in various degraded conditions) situated in various places of the ordinary: on the television set, or discarded on a carpet floor. The Lightsaber could be considered, a modern 'house hold' object, an artifact that depicts a once desired 'future' but at the same time, a reflective past.

Much like the hopes of the **Hover Board** appearing in the market place, the **Lightsaber** also sits within this same landscape of the desire to transform the fictional into the reality. This year, in May (2010) a **GE** engineer named Matt Gluesenkamp attempted to design and build a Lightsaber for real (Fig. 18), unlike all the other previous attempts enlisted throughout the Internet's directory of **Star Wars** subcultures, this one was a genuine scientific attempt to make the Lightsaber function accurately, giving it the ability to slice through dense materials. The image below was his prototype.

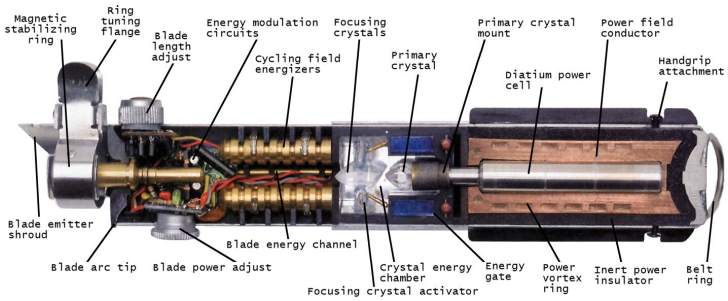



Fig. 18 - The Lightsaber, Engineered by Matt Gluesenkamp (2010)

Unfortunately Gluesenkamp's attempt was unsuccessful and proved **'impossible technologically, at this point in time'** although he remarked **'It seemed quite possible to create a Lightsaber, as seen in the Star Wars films, using existing technologies, materials, and physical laws. I was wrong. But I hope in the near future someone proves me right.'**[14]

## 1.4 – On Location

**'Nostalgia only works when the original experience has been forgotten, so that the container is empty enough to fill with a wide-ranging anxieties about what we have lost'**[15]

Location plays a key role in the construction of an authentic imaginary place, time or instance. They allow us to fantasize and relive moments within narrat ives that have only taken place within the world of fiction, and can often lead to an uncanny feeling of recognition upon entering a space not consciously remembered or when it has been 'forgotten' or clouded by ones own experience of only ever seeing it through the lens of a constructed film-stage or obscure narrative.

At the beginning of this investigation I gave several participants (located around the globe) a film each that was based specifically on their current whereabouts and stipulated that the films provided; firstly had never been seen before by the participant, and secondly were only to be watched once and immediately after receiving. The films that I instructed the participants to view were directly shot in the location of their whereabouts either by city or town. I selected scenes within those films given and pinpointed the exact location in which they were filmed and located their geography using **Google Street View**, which I sent to the participants as map of instructions. I consequently instructed the participants to photograph those specific scenes (without revealing the specific scene to them, just the location) using an instant film camera (strictly non-digital format) to the best of their recollections of the filmic sequence shots, whether they be wide shots or close ups and asked if they could be as compositionally accurately as possible.

The idea being to question and test the authenticity of our memories and demon-

14 Gluesenkamp, Matt article: GE Engineer Crushes Your Childhood Dreams <http://gizmodo.com/5561126/ge-engineer-crushes-your-childhood-dreams>

15 Klein, Norman, The History of Forgetting and the erasure of memory in Los Angelis, Verso, New York 1997, P97

strate the power that, location, environment and artifacts has on fictional narratives in relation to our visual memory, where a sense of reality can become cloudy and if only for an instance, leave a simulacrum of a simulated 'real' experience that only ever existed on a fictional level.

As this example taken by Charlotte Marshall demonstrates a scene taken from **Mulholland Drive (2001)** at 'Winkie's Diner', where Dan (Patrick Fischler) dreams he sees the a terrifying creature behind the wall of the diner. The images taken by Charlotte (Fig. 19) clearly demonstrate this theory and show a striking resemblance to the sequence matched with the location, of course it's not completely accurate, but they are very similar.

Fig. 19 - Cesar's Restaurant aka 'Winkies Diner' (Los Angeles) - photographs taken on the left by Charlotte Marshall, (2010), screenshots on the right, David Lynch - Mulholland Drive (2001)

Whilst, David Benque's image denotes mood, but regarding location and composition are concerned the results were fairly inaccurate (Fig. 20). However it is apparent that the general mise-en-scene reflects the mood and atmosphere of the film he was given, **Lost in Translation (2003)**. The image he has taken may not be visible in the scene I specifically chose, but if one were to associate a film that 90% of it was shot inside a luxury hotel, then the entire mise-en-scene is reflected in all bookshelves, lighting strips and narrow hallways, making the image a general simulacrum of the film and therefore confusing, when it comes to specific recognition.

Fig. 20 - The Park Hyatt (Tokyo), photograph taken at the top by David Benque, (2010), screenshot at the bottom, Sophia Coppola – Lost In Translation (2003)

It could be argued that generally, on an unconscious level with regard to generic image taking, is that most people have acquired a language of constructing a mise-en-scene that connotes certain mood and value that they have acquired whilst viewing, and it could be said that everyone who owns a camera participates in this construction and images taken, lay artifact to this.

On a larger scale, Norman M. Klein describes what he calls **'building Blade Runner'** with regard to the construction and design of urban Los Angelis in the **1990's**. He attended a seminar to which five of Los Angelis' leading urban planners were sat on a panel and discussed 'frantically' how **'L.A should one day look like the film Blade Runner'** [16] the panel started to suggest huge corporate logos that would 'spin' on top of buildings and make up a larger skyline and cityscapes with **'rude aesthetics of an**

16 Klein, Norman, The History of Forgetting and the erasure of memory in Los Angelis, Verso, New York 1997, P94

**immigrant market... safely barricaded between two building hundreds of feet high'**[17]

A scary thought, but a seemingly more frequent topic. The Channel 4 documentary **Dark Side of the Moon (2002)** (Fig. 21) explores the depth of Kubrick's meticulous construction of visual staging that turned the US Apollo 11 rocket launch into the national spectacle that **'changed the technological face of America.'**[18]

Fig. 21 - Dark Side of the Moon (2002), Apollo 11 launch (1969) Dir. Stanley Kubrick

The US government under President Nixon insisted that the launch, be published as **'the greatest achievement by "man"** throughout history'[19] and insisted that Hollywood would be able to fulfill the role of media coverage, more specifically to be directed by **Stanley Kubrick**, who was at the time fresh from **2001: A Space Odyssey (1968).** Kubrick's 'staging' cost a brilliant 15 million dollars; from the redesign of the space suits worn by the astronauts, the reengineered launch pad to position the rocket strategically upon launch, so that the Gold plated USA sign painted on the rockets shaft would reflect beautifully towards the direction of camera's when the sun rose to the moving of the launch pad altogether to create a bolder silhouette that would sit within the memory archive of the US nation forever.

17 Klein, Norman, The History of Forgetting and the erasure of memory in Los Angelis, Verso, New York 1997, P95

18 Dark side of the moon (2002) dir: unknown, in conversation with Kubrick.

19 Dark side of the moon (2002) dir: unknown, in conversation with Kubrick.

# Evolution of an Internet of Things

BY ANA SERRANO AND TIM WARNER

At every major stage in the evolution of IT there has been a distinct technology and associated 'object of interest.' For the mainframe computer it was the firm; for the PC it was the desktop, for the mobile phone it was/is the individual. We are currently at a stage where the potential of technologies directed at individuals has not yet been fully exploited (e.g., the form factor and functionality of a personal, portable device has not yet stabilized), yet we are heading rapidly into the next stage where the object of interest is a 'thing' – a car, a soup can, a bridge, a field, a human organ. Associating an intelligent, communicating device with a thing brings it into the ambit of any other computer network: corporate networks, cellular phone networks, the Internet, or even a self-organizing ad hoc network of other things (e.g., home entertainment devices, public entertainment space).

An obvious corollary of this observation is that the number of 'objects of interest' goes up dramatically as the object changes. There just aren't that many corporations in the world, compared to homes and offices. So where some hundreds of thousands of mainframe computers were sold, hundreds of millions of PCs have been sold, and the number of mobile devices (phones, tablets, etc.) is in the billions. But there are trillions of 'things.'

The object of interest drives the direction of innovation. Learning curve effects, encapsulated in various 'laws' like Moore's Law, accelerate as the quantity of devices shipped grows by two or three orders of magnitude, and as the preferred technologies of the new object of interest both increase in performance and tumble in price. Two examples: web cams were a useful but not universal adjunct to the PC. When cameras became embedded in mobile phones they became cheap and universal, even in PCs. Touch screens were expensive toys, and rarely used in a PC, but are now cheap commodity items, because of the advent of smart phones. In the extreme case innovation affecting earlier objects of interest disappears. Can you think of any interesting developments in the mainframe computer, for example (other than it's predictable disappearance into the cloud)? Is the PC an essentially boring device now, as a platform for innovation?

So as we move to the 'thing' as the driver for innovation, the focus of innovation will shift. Now, for the thing to embed in the Internet, directly or indirectly, we would ex-

pect the broad evolution of capability to look something like this: indirect connection through intermediate, possibly dead-end technologies, followed by direct connection, and, orthogonal to this, an evolution in capability, from identification, to location, to state awareness, and agency. These dimensions interact.

## Connectivity

In the short run an object can be Internet-enabled indirectly if it can communicate with a device (like a smart-phone) that is already Internet-connected, so this is an easy quick developmental path. In the longer run we need technologies that allow an object to participate in an ad hoc network bridged to the Internet. The software issues here have been largely solved in the world of larger machines like PCs, so the evolution of directly networked objects depends on the evolution of suitable hardware–low power wireless communications. We might predict, then, that:

▪ an Internet of things will cause an explosion in demand for tiny, cheap batteries, or power scavengers (i.e., allowing an informated object to live unwired, off the grid for a long time)

▪ because scalability becomes an essential characteristic of IT solutions, scalable self-organizing communication mechanisms such as mesh networks must emerge and mature to enable the required infrastructure. Advances in collaborative mechanisms that characterize the present technology environment, such as Web Services, P2P, collaborative filtering, the blogosphere, and cloud computing, will accelerate and morph into new forms adapted to the collaboration of things.

## Evolutionary Capabilities

The most important thing to know about an object is who it is—it's identity. That's why one-and two-dimensional bar-codes are so useful. But often the code simply identifies the class of object (e.g., the common universal product code identifier) rather than the unique object. And identity is not a simple idea. Authenticated identity is different from a label. A chip-card or SIM chip reliably identifies the credit card or phone, in a way that a QR code or even an RFID tag cannot. Hence we expect an evolution in the capability of objects to identify themselves early in the development of an Internet of things.

A second important thing to know about an object is where it is – it's location. Again,

this is a non-trivial concept.  A GPS chip-set can't tell you where a phone, is if the phone is deep inside an office building. On the other hand, if the device that's inspecting the object knows where it is, then the object can readily inherit this location.

The third characteristic of an object you might want to know is how it is – its state. If it's a bottle of beer, is it cold? If it's a human heart, is it beating steadily? If it's a bridge, is it falling down?

Finally, intelligent objects will have a range of behaviours they will be able to enact, through interaction with other objects, command-control systems, and people. Even if this range of behaviours is limited an ensemble of intelligent objects can exhibit complex emergent (swarm) behaviours.

It's fun to speculate about what a world of 'informated' things would look like, which is why we have sci-fi writers, but more helpful to think about some of the broad dimensions of change it would encompass.

## Emergent Properties

An Internet of Things will be different, creating a new reality with new, or enhanced properties.

The first property is what we call granularity. A corollary of the extension of IT into more and more objects, coupled with increased bandwidth and processor speeds, results in an ability to deal with the world on a more granular basis. This sees its expression in such things as mass customization, small-area weather forecasting, the fragmentation of business processes, and computing on demand. Think of the progression from blogs to tweets as an earlier example of this phenomenon.

A second property is the effect of granularity on time – the ability to sense the environment more frequently, or detect and respond to events in real-time – in effect, time compression.

A third property, alluded to above, is enhanced collaboration. The old Internet morphed from being a distribution platform (think WWW) to a collaboration platform (think Facebook). The introduction of things that must largely self-organize, free of human intervention (just because of the scale and impermanence of the implied networks) shifts the notion of collaboration further. There is very little goal-seeking

behaviour in the Internet, in the sense that agglomerations of people join together on the Internet to seek a common goal, but this will be an essential feature of why objects will interconnect in the Internet of Things.

This provides a framework for thinking about how the Internet of things will evolve, for example thinking about what kinds of products and services would be possible and profitable in an an environment where we could sense and respond in an instant to the state change of an object.

# The Spime Arrives

BY BRUCE STERLING

Characters:
Wilma, a shopper.
Ted, shopper's spouse.

Frame one: a screen. The clicking of a keyboard, mousing sounds: scanning a menu full of arcane-looking but graphically brilliant spime symbols and icons.



**Wilma:** 'Ted! Get in here! I just found our new chair! It's amazing!'

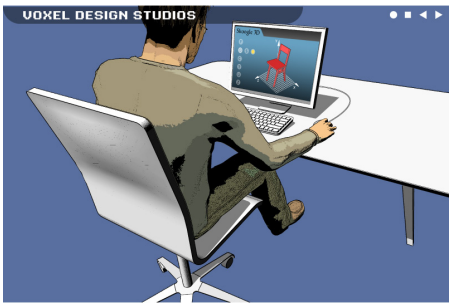
Ted: (disgruntled): The world has got enough designer chairs.

**Wilma:** Well, WE don't, and this one looks so perfect!

(Ted's footsteps).

**Wilma:** (finding a screen with canned webcam footage): That's the DESIGNER! Look, we're literally watching him invent our chair!

Ted: They pay guys to do that?




**Wilma:** He's a genius! I feel so privileged to see this!

**Wilma:** See, he put his new chair right on the web!

**Ted:** That information architect he's got is some kinda babe.

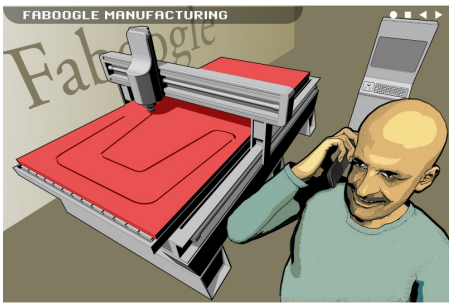
**Wilma:** Oh Ted, you shut up!

(beat)

**Ted** (meditatively): They can manufacture with the web now. Awesome. I need one of those web routers for our garage.


**Wilma:** (firmly) I want that chair, Ted. It's cheap, it's clean, it's sustainable. We need it.

**Ted:** Find the buy tag, baby.



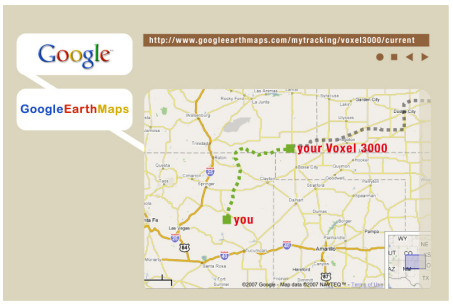

**Wilma:** Also it's fully trackable and we can search it with our house system.

**Ted:** I said you could have it.

Wilma (pushes button).

(break)

Chair approaches silently as Wilma messes with Google Earth screen. DOORBELL rings. Wilma goes to door on screen of 'Burton Household SecureCam.' Accepts delivery of chair.

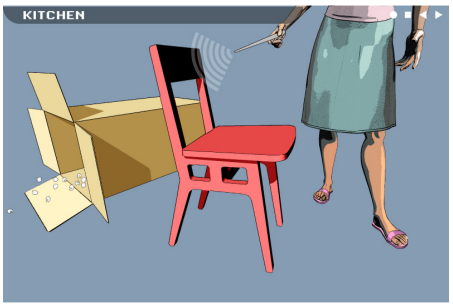



package!

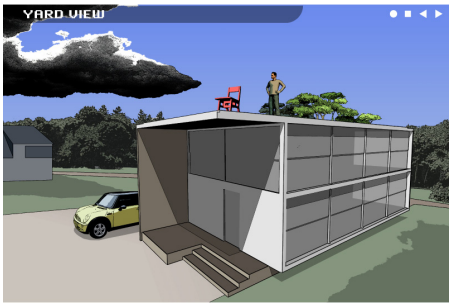

**Wilma:** Ted, the Voxel's here. The spimey new chair!

**Ted:** Quick, privatize it! Set your tag scanner on maximum stun!

**Wilma:** (zapping it) Now it's all ours. You assemble it while I figure out where to put it! (looks through 3D plans of BURTON HOUSE.) Put it up on the roof.

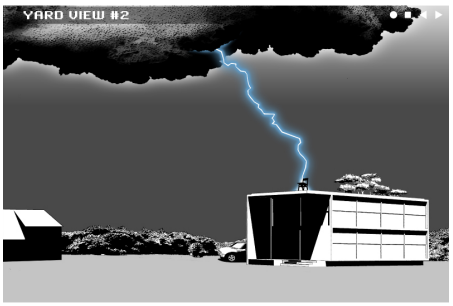



**Ted:** Assembling that was a snap! I'm gonna watch the big storm roll in. Bring me a six-pack!



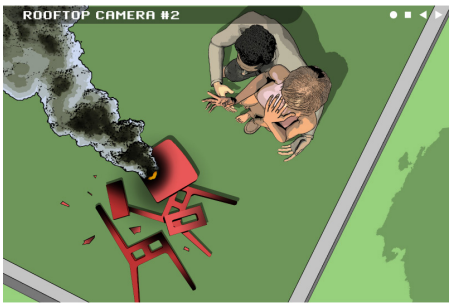

(Chair gets hit by lightning)

**Wilma** (into support screen, distraught): My beautiful Voxel 3000 took a direct hit!




Voxel support staffer (indistinct squeaking).

**Wilma:** No, we weren't hurt. Do what? Sure, okay. I can show you that with my cellie! (handheld video shot of spectacularly wrecked chair) See, that eco GooBoard just sort of boiled when the lightning hit it... But the arphid tag is still just fine! (scans it) Okay, sure I will! (turns chair over methodically, following squeaked instructions) What? a brand new chair? Just for me! That's very nice of you! What great service! You guys rock!

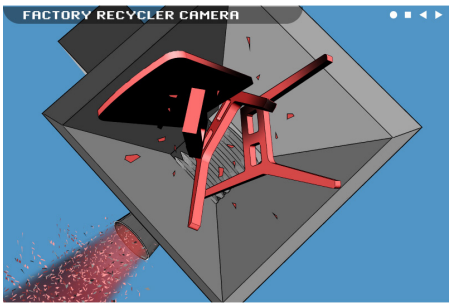



(looks at VOXEL 4000 screen)

**Wilma:** Ted, they gave us a new chair for free!


**Ted:** No, honey, they gave you a free chair because you gave them all our metadata, our user records, and a full video account of the lightning damage. That data's worth more than the chair.

**Wilma:** What's the difference? We don't even have to dump the chair! They're taking it right back to the factory themselves! This is the greatest chair company ever!




**Ted:** (thoughtfully) Baby, someday everything in the world is gonna be like this.

**Wilma:** I can't wait!

# COLOPHON

September 2011, Rotterdam.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V2_ is an interdisciplinary center for art and media technology in Rotterdam (the Netherlands). V2_'s activities include organizing presentations, exhibitions and workshops, research and development of artworks in its own media lab, distributing artworks through its agency, publishing in the field of art and media technology, and developing an online archive.

# BLOWUP

Blowup is curated by Michelle Kasprzak.
Graphic design & Ebook development by Arjen de Jong, Buro Duplex
Texts by Bruce Sterling, Ilona Gaynor, Julian Bleecker, Alexandra Deschamps-Sonsino, Anab Jain, Jon Ardern, and Justin Pickard, Ana Serrano and Tim Warner, Rob van Kranenburg.

▪ Text by Rob van Kranenburg previously published in Real Rules of Innovation for the 21st Century (Part 1) Inspiration Materials by Noema Lab.
▪ Text by Julian Bleecker previously published in Volume 25: **Getting There Being There**, (Archis Publishers, 2010)
▪ Text by Ilona Gaynor previously published as a part of her Master's thesis for the Royal College of Art, London
▪ Text by Bruce Sterling previously published online