

## *Generic Infrastructures* [1]

Rob van Kranenburg

“And then, on the one hand we aim to sustain networks (does this imply a static quality of the network?), yet on the other hand we still want be innovative within these networks (does this imply a dynamic, and therefore un-sustaining quality of the network); how do we 'sustain' when we consider 'flows', 'shifts', and everything being 'open' to everything? What is interesting with networks/information is that everything is simulated within everything, almost eliminating our senses of time, space, and our relation to overlapping contexts. Will humans become so integrated in these networks that the virtual becomes the absolute real? And how will this effect perceptions, behavior, and communication? Will engagement which is now voluntary ultimately become an 'involuntary' simulated process?” Despina Tsalavoutis



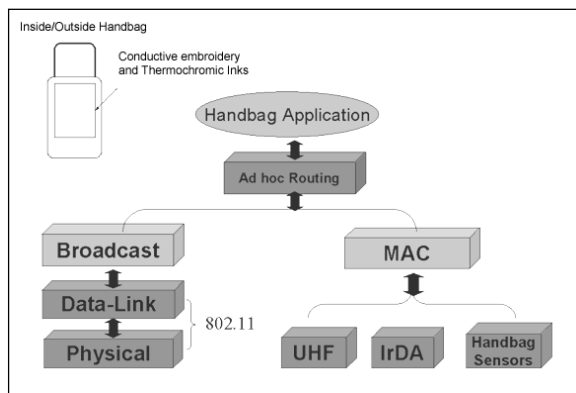
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*Towards Generic Infrastructures:  
You generation goes open hardware*

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<sup>1</sup> Geke van Dijk, Usman Haque and Ben Russell out looking for a curry.

“6 milliard of people facing 50.000 milliard of objects” Yann LE HEGARAT, CNIL



You see the handbag that Katherine Moriwaki's designed to get a visual feedback on the pollution in her street. When the pollution rises above a particular level her handbag changes color. She has to make sure that the handbag is well designed as a handbag. She also has to interface the conductive fibers on the outside to the pda which runs an adhoc network. Put Bluetooth on it and you could map pollution in your neighbourhood.

*I am convinced that being a good tourist--one who gets a lot of enjoyment out of the destinations and journeys undertaken--depends on managing fears. That's why planned violence in such areas has a huge impact on the economy: Egypt, Bali, South Africa. A lot of businesses and destinations thrive only when they offer the tourist a safe trip with controlled excitement, like a roller coaster ride in an amusement park. Thus the popularity of cruises: not the ports of call but the cruise itself: food, sex, drink, and assorted activities (exercise, intellectual seminars, and of course shopping). - Steve Cisler*

**Occasion; lecture at LSE <sup>2</sup>**

<sup>2</sup> DESIGNING MEDIA SPACES FOR ENGAGEMENT AND SUSTAINABLE FORMAL AND INFORMAL NETWORKS 26TH FEBRUARY, LSE OLD BUILDING, A316 FEBRUARY 26<sup>TH</sup> 7:00PM - 9:00PM. The coming decade worldwide will be determined by the strained relationship between formal and informal structures and environments. A design for living together locally in a globally connected world is the new challenge. Bottom-up online and sensor-based innovation (wikipedia, commons-based peer production, thinglink) will create its

## introduction

*"Dans l'actuelle phase de la société d'information, il semble ne pas être très intelligent l'attachement à un modèle simple et légaliste, soutenu par une lutte radicale de construction et de renforcement ésotérique de la propriété intellectuelle. Il serait plus approprié pour le Brésil, et pour d'autres nations partenaires avec des visions semblables, d'agir en collaboration pour d'offrir des alternatives au modèle propriétaire. Si nous conservons la puissance et continuons à stimuler de nouvelles modalités de FOSS dans le pays, cela sera une grande étape pour la constitution d'une société de l'informations plus juste, plus démocratique et plus adaptée aux mœurs de la cyberculture contemporaine. "- Le Brésil dans la Société de l'Information: Gouvernement Lula, Copyleft et Logiciels Libres. André Lemos & Pedro A.D. Rezende*

*'Symphathetic resonance is another word for artistic investigations into materials and properties, where in reverse engineering, 'almost by accident' information occurs/evidences itself.' Joyce Hinterding '*

The coming decade will see the European nation states' monopoly of knowledge-power crumble; the digitally literate middle class will script its own forms of solidarity (with its nationally non-affiliated community), breaking with the 19<sup>th</sup> century democratic institutions (starting with the health, education and security systems), and triggering new class wars between the disempowered majority of non-cognitariat unemployed and the cognitariat which abandons national solidarity.

This withdrawal from responsibility for the commons, public space, public facilities and sense of solidarity will be the end of the democratic state at an organisational level. This stems from the logic of techné, outsourcing memory and agency to an ever more seemingly controllable environment on an individual level. The fact that this scenario is hastened by the great cultural and racial tensions in Western European cities and countryside (where extreme right wing parties keep growing) is secondary. Intellectuals are moving to the outskirts, leaving the centre wide open for reactionary, wild capitalist forces and the threat of a barren commons.

Unless we find new ways of scripting new forms of solidarities with digital technology, it seems like we can envisage two roads that both lead to less dialogue, less communication, less innovation, less business opportunities, less sustainable options. The one focuses on control in a fundamentally flux wireless environment. The other focuses on hiding the technological complexity behind ever more simple user friendly interfaces. In both cases there is no learning by citizens on how to function within such a system, thereby opening up all kinds of breakdown scenarios.

Let us just say there is a window of opportunity.

For the first time we are capable of handling the entire chain of communication: hardware, software, content. Building our own hardware chain to light up a street, their street, any

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own informal networks running parallel to top-down systems, such as nation states and the EU itself.

street. We got no more networks to hack. We can build our own now.

As ever these are important times. Times are always important. These coming five years however, are somewhat extra special. Once you light up the world, once you put a passive RFID tag on everything you can only go forward to an active RFID environment, where tags have some memory and battery power or power scavenging abilities. There is no more stepping lightly in these rooms. There is no stopping these technologies as the notions embedded in them - control, predictability, memory outsourcing - are deeply scripted in the western notions of techné. It is highly likely that we will not be able to debate the introduction of ambient intelligence with rfid as the glue in these smart scenarios publicly with all stakeholders: you, me, privacy activists, lawyers, sociologists, theorists, children, designers, biologists, hackers, programmers, civil servants and the police and military. It is much more probable that only logistics, anti-theft and authentication scenarios - the view that rfid is just a souped up barcode - will go live from a Monday to a Tuesday. A deeper shade of hell is hardly likely to be conceived. In we go to fairy tale land, every object becoming a hybrid space consisting of its analogue matter and a digital opportunity to approach it, with coding notions of efficiency, distrust, fear and control. Everything is not going to be allright. How more many texts can we write about this? How many more books can Katherine Albrecht<sup>3</sup> write? How many more patents can she uncover? And what is the net result? Do you need to go on CNN every evening? Even if you could. Yet we have to keep following two lines of tactics: to keep informing policy of the need to invest in public places and open infrastructures and to keep investing in developing parallel structures with friends all over the world who realize what is at stake in order to secure relatively safe and unstable means of private communication, doing the things that we want to.

### **Schedule for the evening**

#### **1. 1900-1945: Lecture**

**2. 1945: 2015: Breakdown in three groups according to Stewarts Brands diagram, rethinking it in terms of network, open source software-hardware-content-spectrum loop, generic infrastructures. What are in each layer the shared objects and the shared infrastructures we should work on?**

**Group A: Site, Structure.**

**Group B: Skin, Services.**

**Group C: Space Plan, Stuff**

#### **3. 2015: 2030: Groups present their ideas**

*NOTES FROM MARCUS KIRSCH:*

*marcus@resonancedesign.co.uk*

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<sup>3</sup> SPYCHIPS: How Major Corporations and Government Plan to Track Your Every Purchase and Watch Your Every Move, Plum, Penguin, 2006

*NOTES:*

*the architectural sketch, though well chosen, was easily replaceable by a lemon.  
Which is the good thing with creative people, they connect butterflies to cornbags.*

*What I found generally confusing is the general tenor of saving the future from future technology by using future technology.*

*Maybe the terminological focus should be on the structure of future networks rather on their physical representation and technological possibilities.*

*Otherwise the examples that come up will be more, yet smaller and nearly invisible grey boxes.*

*"The Computer is dead!"*

*Probably one of their most innovative moves in years and I am NOT talking iPhone here, was that Apple Computer changed their name to just "Apple".*

*Computers don't matter anymore. Their processing power individually won't get much better unless someone start putting something up the market that is not silicone. Dual or Quadruple Cores don't bring much more power, they just fry your balls faster.*

*The new power is (Doh!) in the massive complexity of networks and their power of evolvement and self-organisation.*

*The new computer is irrational and chaos (theoretically). Time to finally admit that control is an illusion (unless you have a gun and a few lobbyists) and that resistance is futile (unless you like star wars).*

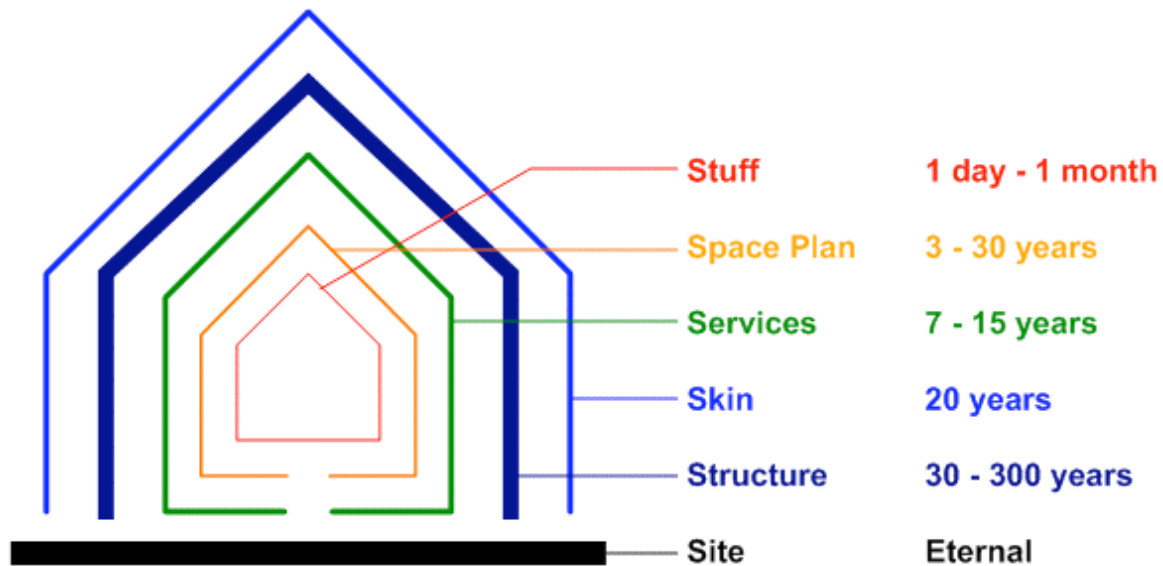
*Technology is boring, watching is merrier than production and 95% of communication is micro-management (I am there in 5 minutes!)*

*The illegal will increase as much as control will slip. I give it another 32 years before people get more relaxed and start drinking more coffee in cafe's.*

*marCus*

**4. 2030: 2100: Recap, discussion and further elaboration on Bricolabs EU FET proposal. Bricolabs investigate new ways of scripting new forms of solidarities with digital technology. Bricolabs are a loosely organized set of already existing bottom up technological labs, r&d institutes, academic labs and research, and open source hardware initiatives. They investigate the recent technological possibilities of wireless opportunistic ad hoc networking, social business models (not based on ip and patents), and educational levels of citizens agency in the loop of open source content, spectrum, software and hardware. As a new organisational model (based on open source) of diverse groups that share "open objects" (open source software AND hardware) and knowledge about how to rework those objects (online "how to's), rather than sharing similar contexts, positions, or objectives, they are dispersed throughout different localities of technological saturation as diverse as London, Sao Paulo, Riga, Bandung, Beijing, Zagreb, Amsterdam, Johannesburg, Brussels, Dortmund and Yogyakarta. Bricolabs will investigate the potentialities of the combination of open societies, open hardware and open labs. Strategic long term aim is to create a brand neutral and non-proprietary generic architecture of everyday infrastructures: energy, connectivity,**

transportation, research and policy for community building.



#### Stewart Brand's 6 S's from *How Buildings Learn*

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"The Shearing layers concept views buildings as a set of components that evolve in different timescales; Frank Duffy summarized this view in his phrase: "Our basic argument is that there isn't any such thing as a building. A building properly conceived is several layers of longevity of built components" (quoted in (Brand, 1994)).

The layers are (quoted from Brand, 1994):

0. Site - This is the geographical setting, the urban location, and the legally defined lot, whose boundaries and context outlast generations of ephemeral buildings. "Site is eternal." Duffy agrees.
0. Structure - The foundation and load-bearing elements are perilous and expensive to change, so people don't. These are the building. Structural life ranges from 30 to 300 years (but few buildings make it past 60, for other reasons).
0. Skin - Exterior surfaces now change every 20 years or so, to keep up with fashion or technology, or for wholesale repair. Recent focus on energy costs has led to re-engineered Skins that are air-tight and better-insulated.
0. Services - These are the working guts of a building: communications wiring, electrical wiring, plumbing, sprinkler system, HVAC (heating, ventilating, and air conditioning), and moving parts like elevators and escalators. They wear out or obsolesce every 7 to 15 years. Many buildings are demolished early if their outdated systems are too deeply embedded to replace easily.
0. Space Plan - The Interior layout--where walls, ceilings, floors, and doors go. Turbulent commercial space can change every 3 years or so; exceptionally quiet homes

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<sup>4</sup> copyright by Stewart Brand

might wait 30 years.

0. Stuff - Chairs, desks, phones, pictures; kitchen appliances, lamps, hairbrushes; all the things that twitch around daily to monthly. Furniture is called mobilia in Italian for good reason.<sup>5</sup>

*"In effect, we have allowed a situation to develop that is like a civilization devouring its seed corn. If an enemy had set out to do this to us -- quietly arranging so that almost no school child in America can tinker with line coding on his or her own -- any reasonably patriotic person would have called it an act of war." - David Brin*

**tracking**  
**so what is it all about?**

*"But poets, or those who imagine and express this indestructible order, are not only the authors of language and of music, of the dance, and architecture, and statuary, and painting: they are the institutors of laws, and the founders of civil society, and the inventors of the arts of life, and the teachers, who draw into a certain propinquity with the beautiful and the true that partial apprehension of the agencies of the invisible world which is called religion." Percy Bysshe Shelley (Defense of Poetry, 181)*

*'And that', put in the Director sententiously, 'that is the secret of happiness and virtue- liking what you've got to do. All conditioning aims at that: making people like their unescapable social destiny.' (Brave New World van Aldous Huxley , 1932)*

On Friday, 14 April 2006 biotechnology met fashion at the [Biotechnology Industry Organization's](#) first ever [Fashion Show](#). Corn, not petroleum lay at the root of this polyester gown. "I wish I could feel the fabric, says Kirsten Philipkowsky, and have you noticed that no one talks much about genetically modified foods anymore? She goes on to say on [blog.wired.com/biotech](#):

*"BIO does mention food in this [press release](#), but it's in the context of "processing aids", not genetically modified entire organisms. "Industrial biotech," like fabric and other textiles made of corn, ethanol fuels, plastics and other consumer goods are placed in the limelight -- and that's probably an easier PR battle for biotech to win. This stuff has a much more clear benefit - mostly to the environment - than genetically modified crops, which seemed to mostly benefit agricultural biotech companies."*

In ten years time a once hot discussion topic addressing severe repercussions for human bodies, organic systems and business practices, has been framed in terms of fashion, not health. Industry spin, broadcasting dominance and more or less stable audience profiles helped to create this information space.

Technologically framed issues of the coming decade will be on smart environments, The Internet of Things, pervasive computing, ubicomp, Things That Think, Disappearing Computer, Ambient Intelligence, calm technology, all terms for the trend of chips and

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<sup>5</sup> [http://en.wikipedia.org/wiki/Shearing\\_layers](http://en.wikipedia.org/wiki/Shearing_layers)



circuits, switches and boards moving out of the computer as we know it, into clothing (wearables), homes (domotics), military operations (smart dust), healthcare (implants), security (smart cameras), and through logistics and retail into the chain of things that we buy and sell every day. However, they will not move out without sending postcards home. They will keep in touch with the digital infrastructures and databases by calling in from time to time. Following Mark Weiser's vision in his seminal 1992 Computing for the 21st century text, this view on computing is the fastest spreading paradigm in the history of technology: from Intel (hardware), to Philips (Ambient Intelligence), from Nokia (Near Field Communication), to DARPA (distributed systems), from the EU vision of Digital Territory to the EPC Global dream of an Internet of Things (Object Name Servers).

### *RFID*

The most advanced outpost of contested territory is occupied by RFID, An old technology based on radar, detested by system engineers for its insecurity, unreliability and plain technological simplicity, whose time has come as it fills a need on all levels of successfully introducing new technologies.

The disappearing computer, - launched by Future and Emerging Technologies, the European Commission's IST Program - 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 (it. mine) today - an invisible, pervasive medium distributed on our real world."

Disappearing Computer, Ambient Intelligence, Sense and Simplicity, Things That Think, pervasive computing, ubiquitous computing, calm technology, all terms generated from a single text by Xerox guru Mark Weiser, The Computer for the 21st Century, in which he states: "There here is more information available at our fingertips during a walk in the woods than in any computer system, yet people find a walk among trees relaxing and computers frustrating. Machines that fit the human environment, instead of forcing humans to enter theirs, will make using a computer as refreshing as taking a walk in the woods." The fundamental problem he foresees is privacy: "hundreds of computers in every room, all capable of sensing people near them and linked by high-speed networks, have the potential to make totalitarianism up to now seem like sheerest anarchy. Just as a workstation on a local-area network can be programmed to intercept messages meant for others, a single rogue tab in a room could potentially record everything that happened there."

The technology that is now, only thirteen years later, spearheading this drive to ubiquitous connectivity spearheading is not hundreds of computers locally spread thin, but RFID, radio frequency identification. Privacy, however, is manifestly indeed the key factor in the forces the fuel the drive to broadly adopt it as enabling technology.

This is the fundamental change and the technology design challenge that we are facing in pervasive computing and the converging trend towards smart environments; the deliberate attempt of a technology to disappear as technology. In what respect will it alter our notion of the self as a more or less stable identity? Will it not provoke an identity building on the



ability to change roles in communication environments? What kind of privacies lay hidden in our new connectivities? What will it do with our creative abilities as expert users to improve, challenge, build upon and advance a technology that is running in the background?

CASPIAN (Consumers Against Supermarket Privacy Invasion and Numbering) downloaded confidential documents (by simply typing confidential into the internal search engine) from the home page of the MIT Auto-ID Center, the organization entrusted until 2003 with developing a global Internet infrastructure. "Among the "confidential" documents available on the web site are slide shows discussing the need to "pacify" citizens who might question the wisdom of the Center's stated goal to tag and track every item on the planet, along with findings that 78% of surveyed consumers feel RFID is negative for privacy and 61% fear its health consequences. PR firm Fleischman-Hillard's confidential "Managing External Communications" suggests a variety of strategies to help the Auto-ID Center "drive adoption" and "neutralize opposition," including the possibility of renaming the tracking devices "green tags."

In May 2004 the UK National Consumer Council stated that one of the main reasons for bringing all the stakeholders to the table was that it "seemed clear to us, that this technology is being developed and implemented without the knowledge or participation of consumers more widely." From a research perspective too the US National Academy of Sciences noted that "more than one company has had to change or rethink its plans for RFID technology because of the concerns of consumers and privacy advocates about how the technology would be used."

So why should you know about it?

First, RFID technology is at a crucial point, in terms of standards and policies, regulations and deployment and services.

Second, As technology becomes ever more deeply embedded in everyday life and the experienced economies, it can no longer see design as a front end tool, nor social and cultural issues as a sphere that has to mold itself around new technologies. On the contrary, as we see so clearly with RFID one has to hardcode these issues into the systems architecture and see them not as problems, not as drawbacks but as challenges to overcome at all levels of a successful introduction of new technologies.

Third, we need to move to debate further from its deadlocked polarized state it is in now. Distributing yourself as data into the environment has been the revolving wheel of progress for our conceptions and applications of technology. Location based, real-time services, applications to strengthen communities, and the capacity to generate high quality data in an information overload information, these are all possibilities within a wired connected environment that need serious exploration and research.

There are four levels of requirement for a successful introduction of new technologies: code, node, link, network. The code node link network framework helps to structure thinking on emergent technologies. Code refers to the axioms underlying the technology, how does it function and why. Marc Langbeinrich thought: "You get real world privacy

guidelines from direct feedback from developers.” However, he found very little thoughts on privacy at all from developers. On the code level, privacy is seen as a layer that can be added, not as a factor in the coding process. His proposal was to make simple direct surveys to tick off a code against privacy issues, and a generic privacy toolbox. Node refers to the new data and information structures that are generated by the technology, for example new languages such as PML (Physical Markup Language). Link refers to the technological and application and services context that the new technology is affecting. Network refers to the broader cultural, social and political issues that are raised by the new technology.

RFID fits the bill on all levels. It is a relatively cheap answer on all levels to the most basic question:

**Code:** In the dominant paradigm computing needs to be distributed, non-central. As RFID is pull technology, the RFID reader emitting energy so that the passive tag gives its unique number (says hello, here I am) the EPC Global network layout makes it possible to track a bottle in your room (provided there is a reader in your door, floor, building) through a simple web query by typing the unique ID number ‘-(available through retail channels) as the ID of the bottle is logged into the local database ( your home-computer, work server, office building network) which is hooked up to the EPC Global network. In this database through an RFID scripting language called Savant the item’s log is sent to an Object Name Server (ONS) where it can be accessed via the web, for example from Tokio. It is very hard for a system to get so global, local, real-time and easy accessible.

**Node:** In a digital environment there is only scripted scarcity. Servers now hold the capacity to log, store and track vast amounts of data generated by formerly lone objects. In the logistics need to individuate, RFID is regarded as a smart barcode.

**Link:** The merging of analogue and digital connectivity has many guises - from Ambient Intelligence to pervasive computing. This way of looking at computing - from design to infrastructure, from concept to prototype - has no competition at the moment. It is a global, all encompassing framework to reflect on and design towards more digital connectivity. In the EU vision the concept of Digital Territory projects a mediascape over Europe in order to deliver real-time services to citizens and RFID is seen as the glue to tie the wireless spectrum together.

**Network:** a policy directed towards more control, security, safety, non-risk directed. Recently a heated debate was sparked by the US decision to embed rfid chips into passports. Some people sketched the scenario of a terrorist on a foreign airport using an rfid reader to scan for US citizens. RFID, however, is being embedded in passports, bankcards, credit cards, Chinese ID ‘smart’ cards, classified documents, employee access cards, travel passes, and other kinds of identification that identifies human beings by unique numbers. In the current ‘War or Terrorism’ RFID, because of its distributedness, cheapness, technological simplicity, - although insecure - is a logical candidate for bottom up tracking and tracing of things and the ways in which things move around; in boats, in trucks, in planes, in hands (of human beings).

So what would you do if you oppose RFID? It is impossible to provide an alternative to

RFID that operates on all levels. Yes, 3D barcodes can replace RFID at item level, but 3D barcodes cannot be the glue to the Internet of Things, nor can they — because of their visibility — be used as a layer of surveillance. Yes, GPS can do a lot in terms of tracking, Bluetooth provides a productive range, Zigbee networks deliver — battery powered predefined nodes with assigned functions (for example home security network), but at item level it is way more expensive than RFID tags that draw their energy to say ‘Hi’ from the reader.



In 2007, you will no longer hear of RFID. The word will be either smart card, M2M (Machine 2Machine), or NFC (Nearfield Communication).

So why should you care about it?

Susanne Ackers describes how McLuhan saw satellite communication systems both as an extension of the human nervous system and as a point of no return. The satellite infrastructure creates connectivity from above. The RFID infrastructure creates connectivity from below. Once you could say: “And we are in the middle”. Currently, however, there is no more we as in we human beings, the “we” is an information space like any other.

So who or what is going to do the interpreting of all these data?

That is the key question. Three observations caused this question to be noticed as a question: *There is no more public, only audience.* Putting technological issues on an agenda

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<sup>6</sup> [Fujitsu unveils GPS receiver with integrated RFID tag](#) Darren Murph

“While we've got both GPS receivers and RFID tags handling [very important duties](#) around the world, [Fujitsu](#) has gone and unveiled a GPS unit with built-in RFID capabilities to provide the best of both worlds. The Tag Locator V2 sports the locating abilities we've come to know and love, promising accurate longitude / latitude measurements between "three and five meters, and bundles in an active RFID tag that operates on the 429MHz frequency band. Once the GPS receiver beams out the location data, the device then communicates the [RFID information](#) via "a unique ID," and can purportedly channel its data to any reader within 200 meters. Designed primarily to provide constant streams of precise data in airports, garages, and other locales that manage a plethora of equipment / vehicles (or [lucrative PS3 boxes](#)), the units should hit shipyards soon at ¥20,000 (\$169) a pop.” [feed://www.engadget.com/rss.xml](http://www.engadget.com/rss.xml)

for a 'general' audience requires either a thousand interfaces (for a thousand different audiences) or a scandal. *There is no forgetting, no memory loss in Digital Territory*: a world where a layer of digital connectivity has been programmed on all things analogue. Consequently you should not say: "I'm not doing anything wrong, so why should I worry about smart cameras with 3D coordinates reading my face, or this RFID/M2M/NFC infrastructure? No, you should worry about whom will deem what wrong in three years from now, as from the moment of going live all movement will irrespective of man, machine or animal) be logged, stored and data mined. The data-mining algorithms are not open source, transparency is limited and there is no talking back feature. Who knows, you may even get in trouble for reading this book. In the analogue days we could get away with claiming 'Hmm, I'm not sure where I've picked that up.....' In Digital Territory this is no longer possible. *There are no more humans, only information spaces*. At a particular moment from a database point of view, you will have more in common with your car than with your neighbour. For some idiot savants a green toothbrush is terribly different from a red toothbrush, a very different thing altogether..

So you want to know why I worry?

Where is the love? Where is the shame?

In whatever what or which is going to do the reading, looking, gazing, (undistinguishable from tracking, tracing as looking implies looking with a digital eye) will there be a moment that it looks away? Can it be shy?

Can it blush?

*It took me five years to figure out, to grasp, - understand - let me use the word resonate - these lines of Heraclite: and I rephrase them in my own lines - "of all that which is dispersed haphazardly, the order is most beautiful." In the Fragments you read that these lines are incomprehensible as far as the Heraclitus scholars are concerned. They can not link it as a line of verse with other words in other lines in verse. I read it and in reading I knew it to be true. Knowing that only as experience is not very productive in a society that has no non-iconic medium for transmitting these kinds of experiences. In order to make this experience productive; read: make it politically viable and socially constructive - in order to find ways of transmitting, ways of teaching experiences like this - we textualise them. We find analogies, we read initial lines as metaphor, as metonymy.*

*I went for a walk one day in the woods near F., in the Belgian Ardennes. A beautiful walk it was, steep down, hued autumn colours, leaves fading into black. In the quiet meadow that we passed I saw autumn leaves, small twigs, pebbles sometimes - hurdled into the most beautiful of patterns by the strenght of water moving. I looked hard realizing there was indeed no other way of arranging them.*

*I recognized leaves as data. I recognized data as data. And I recognized the inability to find a way to come to terms with this line of Heraclite without walking, without taking a stroll in the woods and look around you, look around you and find the strenght of streams arranging;*



*ca reste possible alors, opening the door in prestes maia, the biggest squat in sao paulo*

*"One of the most frustrating things that occur at holiday time is the over-crowded stores and long wait times in line just to make it out of the store. However, thanks to Pay By Touch's biometric payment solution, shoppers now have a fast and secure way of moving through those shopping lines.... And for any customer who used or enrolled in their biometric payment system between November 1 and December 31, 2006 Pay By Touch will also enroll them into a drawing to win a year of free groceries." – Kurt Nimmo*