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The Clean Rooms' Dirty Secret

„Temporary Software Art Factory": Readme100 in Dortmund, Germany, 2005

Dr. Inke Arns, Francis Hunger, Hartware MedienKunstVerein

If we are to believe eyewitness' accounts, the factories of the 19th and 20th centuries used to be dirty, sticky, and, to say the least, unhealthy to work in. With the advent of the 21st century, the end of the industrial age and the advent of the "Information Age", at least in the so-called First World, there are high hopes for a better future. An article published in 2002 in the *Mother Jones Magazine*[1] however shatters these expectations. While the semiconductor industry prides itself on its high-tech 'clean rooms,' a growing number of workers (who in these industries happen to be mostly female) are finding out, according to the magazine, that „the state-of-the-art protections are meant to safeguard microchips, not humans." The significantly increased number of cancer cases in chip production plants seriously puts into question whether the production conditions found here are any better than, e.g., those found in the steel production plants of previous centuries. Today, as the sensory signals (like smoke, fire, heat) are missing in the production process, these new unfavourable production conditions are less immediately accessible to the human senses – and, therefore, potentially more dangerous.

What is being produced by the semiconductor industries provides the material or hardware infrastructure for an increasingly software-based environment. It is an environment that is characterised significantly by the performativity of code[2], by effective program codes that are constantly present in our environment as powerful invisible layers, or rather: by immaterial structures that literally and actively constitute our environment, in a very different way than we know it from built or material structures or architectures. This "augmented space"[3] created by invisible layers transparently covering or constituting the material environment as we

[1] http://www.motherjones.com/news/feature/2002/03/clean_room.html

[2] Cp. Inke Arns: Read_me, run_me, execute_me. Code as Executable Text: Software Art and its Focus on Program Code as Performative Text, in: Rudolf Frieling / Dieter Daniels (eds.), *Medien Kunst Netz 2: Thematische Schwerpunkte*, Springer Wien/New York 2005, pp. 197-207, http://www.medienkunstnetz.de/themes/generative-tools/read_me/textsummary/

[3] The term „augmented space" was developed in 2002 by Lev Manovich. See his Poetics of Augmented Space, in: Inke Arns / HMKV (eds.): *Dispersed Moments of Concentration. Urban and Digital Spaces* , Frankfurt/Main: Revolver, 2005, pp. 102-121

know it is a space where "code is law"[4] (Lawrence Lessig). Thus, in this new space moments of „implosions of the political"[5] can be discerned: Where built architectures are merely channelling human behaviour, the ability of ubiquitous program code extends far beyond that. While the "disciplinary societies" as described by Michel Foucault were characterized by built enclosures that Gilles Deleuze compared to "casting moulds", in today's "societies of control" monitoring and modulation have appeared resembling a "self-deforming cast that will continuously change from one moment to the next".[6] This self-deforming cast is characterized by transparency (= invisibility – withdrawing from our immediate sensory perception)[7], immateriality (which is a quasi factual materiality interconnecting single materialities), and performativity ("code-is-law").

By addressing the ubiquitous presence of program code, software art points to the fact that software is an invisible performative layer that increasingly structures our everyday life. Software art, a term that was coined around 1998/99 in the context of net art[8], has been referred to by some authors as „experimental"[9] and „speculative software"[10] as well as „non-pragmatic" and „non-rational"[11] software. It comprises projects that use program code as their main artistic material or that deal with the cultural understanding of software. Software art thus recalls the fact that programmed architectures are not 'God-given' but have been written/coded by humans and thus can be conceived of also quite differently.

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[4] Lawrence Lessig: *Code and other Laws of Cyberspace*, New York 1999, http://www.code-is-law.org/

[5] Cp. Inke Arns: Invisibility and Politics. On Spaces of the Political beyond the Visible, in: Inke Arns, Ute Vorkoeper, HMKV (eds.): *vom Verschwinden. Weltverluste und Weltfluchten / On Disappearance. Loss of World and Escaping from the World*, Frankfurt/Main: Revolver - Archiv für aktuelle Kunst, 2005, http://www.projects.v2.nl/~arns/Texts/Media/Arns-Invisibility-05-EN.pdf

[6] Gilles Deleuze: Postscript on the Societies of Control, in: *L'autre journal*, Nr. I, May 1990

[7] Cp. http://en.wikipedia.org/wiki/Transparency_%28computing%29

[8] The term „software art" was first used around 1998 when referring, for example, to I/O/D's *Webstalker* project (1997). In their project *Introduction to net.art (1994-1999)* (1999, http://easylife.org/netart) Alexei Shulgin and Natalie Bookchin explicitely point to „software art" as to one subgenre of net.art and one of its future directions of development. In 2001, transmediale (Berlin) was the first festival to introduce the category of „artistic software"or „software art" into its competition.

[9] Tilman Baumgärtel, Experimentelle Software. Mysteriöse Korrespondenzen: Zu einigen neueren Computerprogrammen von Künstlern, in: *Telepolis*, Oct. 28, 2001, http://www.heise.de/tp/r4/artikel/9/9908/1.html

[10] Matthew Fuller, for example, distinguishes between 'critical', 'social', and 'speculative software'. See Matthew Fuller, Behind the Blip: Software as Culture,» in: *Nettime*, Jan. 7, 2002, http://amsterdam.nettime.org/Lists-Archives/nettime-l-0201/msg00025.html

[11] Olga Goriunova and Alexei Shulgin define 'artistic software' as 'unpragmatic' and 'irrational': „[I]f conventional programmes are instruments serving purely pragmatic purposes, the result of the work of artistic programmes often finds itself outside of the pragmatic and the rational." (Olga Goriunova / Alexei Shulgin, Artistic Software for Dummies and, by the way, Thoughts About the New World Order, in: Nettime, May 26, 2002, http://amsterdam.nettime.org/Lists-Archives/nettime-l-0205/msg00169.html

Bringing Readme to Dortmund (and thus for the first time to Germany) was, first of all, a rather spontaneous idea that developed in August 2004 during the 3rd Readme Festival in Aarhus, Denmark. I (Inke) participated for the first time in a Readme conference and stayed afterwards for the five days of the Runme Dorkbot City Camp, jointly organised by Dorkbot London, runme.org, Readme and other institutions. It was, in its mixture of academic conference, hands-on presentations, discussions, exhibitions (in the gallery space rum46), people, performances and hang-outs (the cosy atmosphere of the Academy of Arts Aarhus) one of the most inspiring events I ever experienced. I talked to Olga and Alexei, and invited them and Readme to Dortmund, as guests of the Hartware MedienKunstVerein, whose artistic director I was to become in January 2005.

Now, after actually having worked in Dortmund since the beginning of 2005, it becomes clear that Readme100 in Dortmund was not just a spontaneous idea. What makes Dortmund particularly interesting as a venue for Readme 100 is the fact that the city and the whole region of the Ruhrgebiet is in full transition from a former heavy industrial city (coal, steel) to a city/region focusing on new technologies.[12] Not only is the area of the Phoenix West[13] blast furnace plant, which dates back to the 19th century and was shut down in 2001, particularly emblematic of the structural change now taking place from the age of industry to the age of information (the 110-hectare area, including the 2.200 square meter large PHOENIX Halle[14], used by the Hartware MedienKunstVerein since 2003, is being developed to provide the infrastructure for the nanotechnology, software and logistic sectors). Beyond that, it is also a particularly poignant example of the effects of globalisation: In the context of China's efforts to meet demand for steel from its booming construction industry, large parts of the coke and steel production facilities owned by ThyssenKrupp[15] have been sold to China where they have been re-assembled just north of Shanghai.[16] Ironically, as coke and steel are now getting

[12] Due to the closing of the coal mines and the steel factories Dortmund currently has 18% unemployment.
[13] See the amazing photo documentation on http://hebig.org/playground/facetbrowser/?do=showpostings&facet=company&value=phw
[14] PHOENIX Halle is a three-nave industrial hall built on the grounds of the blast furnace plant in Dortmund-Hörde in 1895 as a spare storage warehouse. Here, the exhibition *Games - Computer Games by Artists* (2003) took place - which received the "Innovationspreis" by Fonds Soziokultur and an award of distinction of the German section of AICA - as well as the exhibitions *so wie die dinge liegen*, *Nam June Paik Award* (both 2004), *Dispersed Moments of Concentration. Urban and Digital Spaces* and *On Disappearance. Loss of World and Escaping from the World* (both 2005).
[15] For more information on ThyssenKrupp's activities in Dortmund and China cp. Ray Hudson: *Changing Industrial Production Systems and Regional Development in the New Europe*, Working Paper 45/02, http://www.one-europe.ac.uk/pdf/w45hudson.pdf
[16] Patrick Bartlett: German steel works finds Chinese home, *BBC News*, 2 September, 2002, http://news.bbc.co.uk/1/hi/world/asia-pacific/2231403.stm

extremely scarce on the world market, the price is rising which in return puts the construction of new coke production plants in the Ruhr region within the realm of the possible.

What we are witnessing on the Phoenix West area thus symbolises precisely the transition from a fordistic / industrial production model to a post-fordistic / post-industrial one. The fordistic production model is represented by, e.g. Hollerith calculating machines, machine processing, "mechanization takes command", batch processing. In fact, the first digital computers were developed as calculation machines that would satisfy the growing need for mathematical calculations for aerodynamics, weapon trajectory tables or population census.[17] The post-fordistic, globalization-related model which started to evolve in the 1970s, is characterised by upcoming concepts of timesharing, offshore outsourcing, borders transparent for capital but not for human resources, the introduction of object oriented programming languages, the increasing networking of computers and the first multimedia computers in the mid-1980s. The "temporary software art factory" as a concept relates both to the originally fordistic calculating machine, the networked, interactive medium that emerged from it, and globalized modes of production.

Set against the background of these massive ongoing restructurings of modes and places of production, the “Readme100: Temporary Software Art Factory” call for proposals which was issued in June 2005 called for artistic and theoretical works that would address unconventional and experimental ways of software art production, including self-employing, hiring, using open source solutions, interfacing with the IT economy sector and educational/cultural institutions, and especially the practice of outsourcing. We were interested in how people would address “the clean rooms’ dirty secret” (i.e., software productions conditions in the context of a globalized industry). The international jury selected ten new artistic projects from over hundred submissions and supported these projects (five new artistic works, five new theoretical articles) with production grants. The artists and authors of the selected projects come from Argentina, Australia, Germany, Great Britain, France, Italy, Russia, Switzerland and Spain. The selected projects were premiered during the Readme 100 festival in the City and State Library Dortmund (and they will consecutively be presented at transmediale.06 in Berlin in February 2006). On the closing night in Künstlerhaus Dortmund an abundant series of performances based on self-written software

[17] See on this, for example, Edwin Black, *IBM and the Holocaust: The Strategic Alliance Between Nazi Germany and Americas Most Powerful Corporation*, Crown Publishers 2001, http://www.ibmandtheholocaust.com

took place and DJs played electronic music until dawn. The detailed program can be found at http://readme.runme.org.

Readme100 was hosted by Hartware MedienKunstVerein (HMKV), Dortmund, and co-organised by HMKV and Readme, Moscow. It took place in cooperation with Runme.org, the Kulturbüro Stadt Dortmund, and transmediale.06, Berlin. Readme100 was generously supported by the Ministerpräsident des Landes Nordrhein-Westfalen, the Stadt- und Landesbibliothek, Dortmund (thanks to Ulrich Moeske and Gisela Koch for hosting the two-day conference), the LesArt Literaturfestival, Dortmund (thanks to KP Sachau), the Künstlerhaus Dortmund (thanks to Pit Schmieder and all the others who supported us for providing the space for the performance program), AFAA - Bureau des Arts Plastiques / Französische Botschaft, British Council, Pro Helvetia, and Bogdanov & Associates, Moscow.