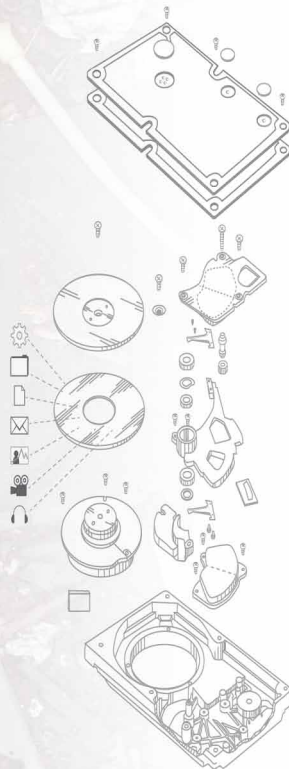# BEHIND THE SMART WORLD

BEHIND THE SMART WORLD
SAVING, DELETING AND RESURFACING DATA

Agbogbloshie is a district in the teeming metropolis of Accra in West-African Ghana. The world's largest electro-waste dump is located here. 22 hard-drives brought back to Austria from this dump are the starting point for the exhibition. Alongside the material and exploitative dark sides of the dirty business with electronic waste. The exhibition brings together artistic positions dealing with the value of digital information and our constant production of data. The saving, deleting and resurfacing of information is part of our everyday life. We leave not only material traces that have disastrous effects on people and our environment, but also digital traces, the value of which is to be called into question.

The smart world. Created by policymakers, the advertising world and creative industries that portray to us a world of shiny brand new technologies. A world consisting of apps and smart cities collecting big data along with the promise to solve all problems of human kind. Though, behind the facade of the smart world, our shiny gadgets become obsolete faster than ever, turning into toxic e-waste. Our apps and smart cities have developed into an all encompassing surveillance apparatus used by governments and companies to collect and store our data. There are issues that the smart world

can solve. However our information-hungry lifestyles raise new problems concerning electronic waste, data breaches, data privacy and data ownership.

Data gets saved, backed-up, duplicated, shared and sold for profit. Consequently deleting data gets far more complicated than emptying the trash bin. While destruction of a hard-drive is the most effective way of data erasure, in the cloud we loose control of it, not able to delete or destroy it. In case of complete erasure the 'death of data' leaves a material corpse behind. A rather toxic corpse, in fact, that does not decay easily, containing chemicals and minerals, some valuable to salvage. When erasure fails can we recycle data from hard-drives as well? Traces of our data once lost, forgotten, trashed or deleted resurface again. Can this data be re-used or abused or is it just digital junk? The artworks in this exhibition reuse found data and connect seemingly immaterial information to their material containers.

22 HARD-DRIVES

13 Desktop hard-drives (3.5"), 2€/per piece
9 Laptop hard-drives (2.5"), 4€/per piece
Capacity ranging from 644MB to 160GB

3 were immediately accessible
2 were recovered with open source tools
1 was recovered by data recovery technicians

In total 85GB of recovered data

Behind the Smart World Research Lab Blog
http://research.radical-openness.org/2015/

Behind the Smart World Publication
http://publications.servus.at/
2016-Behind_the_Smart_World/

FORENSIC FANTASIES
by KairUs Art+Research (Linda Kronman, Andreas Zingerle)

Forensic fantasies is a series of three artworks dealing with data breaches of private information. In the artworks we use data that was recovered from hard-drives that were dumped in Agbogbloshie, Ghana. Reports suggest, that at this e-waste dump, criminals extract data from hard-drives to demand payments from their pre-owners or to resell the information.

#1: Not a Blackmail
The first artwork of the series examines the possibility to blackmail a prior owner of a hard-drive. Besides finding sensitive data of the owner it is crucial to be able to contact the person to express ones demands. From one hard-drive we could find out who it had belonged to, further through social media platforms, we found his current employer and other contact details. Rather than blackmailing the person we grew curious if we could get in contact with this person. Therefore the artwork consists of one ready to be posted package, containing the recovered data and a letter to the pre-owner.

#2: Identity theft

The second artwork of the series focuses on the phenomena of romance scamming. Scammers conduct identity theft by copying bulks of images of attractive people to create fraudulent profiles on social media platforms or dating channels. The scammers pose to be in love with their victim and after gaining their trust they lure them to give gifts and money, always hiding behind their false identity. One of the hard-drives contained several images of attractive ladies. We suspect that the images were copied to this hard-drive to create and sustain fraudulent profiles. West African Nollywood films (mainly Nigerian and Ghanaian low-budget films) have their own way of dealing with the phenomena of scamming, which is a recognised problem in these countries. In this artwork 18 of the fraudulent online profiles using the same images found on the hard-drive are combined with Nollywood found footage clips that thematises the topic of romance scams.

#3: Found footage stalkers

The third artwork of the series takes a closer look at images found on one of the hard-drives. Scanning through the private photos enables very personal insights into the life and habits of the pre-owners of this hard-drive. Through the years we follow them to parties with friends, trips to amusement parks and christmas celebrations with the family. It is similar to the feeling of stalking someone unknown online, despite the rather uninteresting photo material, one starts to create a story

and attach a personality to these fragmented digital representations. By presenting the photos in an album we approach the material as 'found footage', the practice of gathering material from thrift shops, yard sales and flea markets for remixing and creating new artworks, something artist have done for generations. Hence the artwork confronts earlier practices of using 'found footage' with now digital materials found amongst our trash.

KairUs is a collective of two artists, Linda Kronman (FI) and Andreas Zingerle (AT). Our work focuses on human computer and computer mediated human-human interaction with a special interest in transmedia and interactive storytelling. Since 2010 we have worked with the theme of Internet fraud and online scams, constantly shifting our focus and therefore approaching the theme from a number of perspectives, such as data security, data privacy, ethics of vigilante communities, narratives of scam e-mails, and technologies in relation to fraud. http://kairus.org
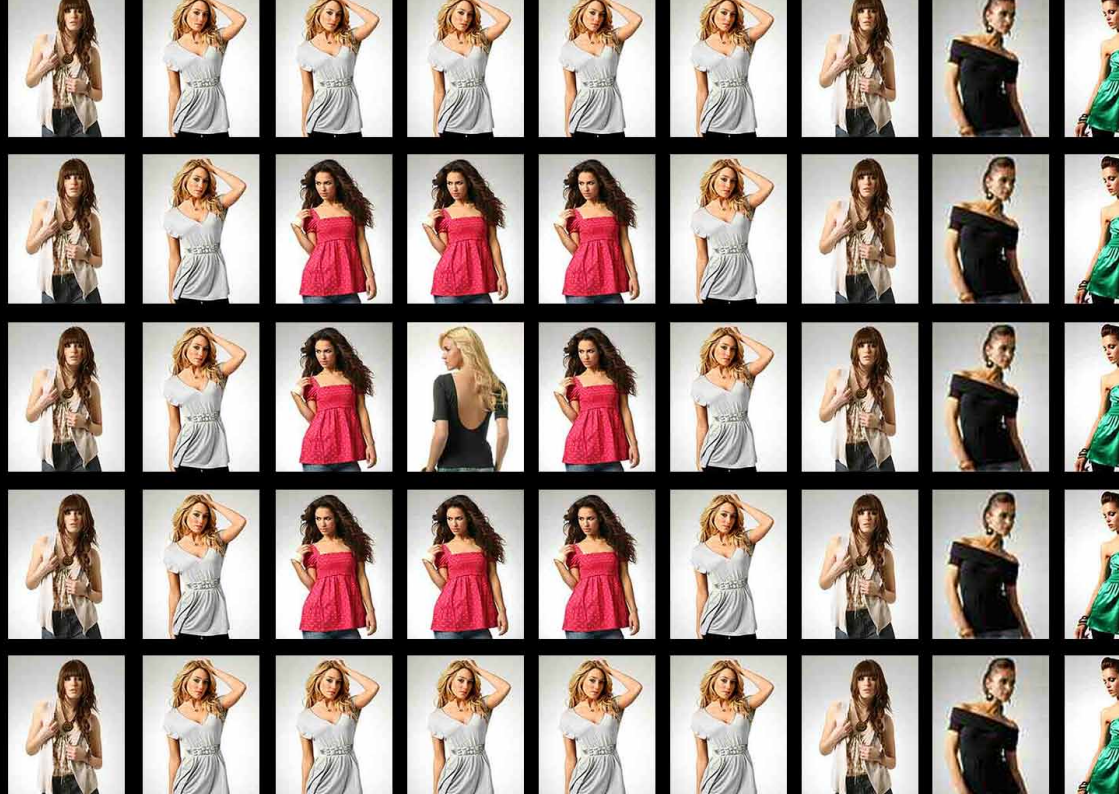
SHOPIMATION
by Fabian Kühfuß

When I looked into the first restored hard-drive, I will call it '0020' for now, I realised that there was no longer a structure (no folder structure but also no filenames). I decided to build up a new, subjective, structure over the stored data. It became apparent that a lot of thumbnails have been stored on the hard-drive '0020'. Those thumbnails are placeholders for larger images which itself are placeholders for objects, places, people or situations. This makes them, the thumbnails, as a placeholder of a placeholder. A placeholder for real or fictional remembrance, for wishes and dreams, or for a secret. There is a huge amount of thumbnails from commercial products on '0020'. For me these commercial thumbnails are place-holders for the aesthetical reflection of the 'original owner' about him-/herself. Shopimation is an approach to get closer to an unknown individual by research-ing his or her 'aesthetic dreams', represented by fashion products, represented again by product photos which are also represented by thumbnails. As the techno-imagination of Vilém Flusser is an approach of coding a function of the meaning of techno-pictures, Shopimation uses those thumbnails to build up a subjective code of an aesthetic. Built by the remaining data of an unknown person and the re-arrangement by the artist Shopimation could be a code to translate the very

private dream of who she/he would like to be. The short animation video is combining the 'shopping dreams' with his/her music library. So we get also an idea of how he/she is hearing the world.

Fabian Kühfuß (GER) finished his academic studies of visual art in the time- and computer based art class by Ulrich Wegenast at the Free Art Academy Baden-Württemberg in 2011. From 2011 ongoing he works as a freelancer media artist. 2012 Kühfuß got his first grant, a project grant by the Karin-Abt-Straubinger-Stiftung. 2014 "Hillarious dialog with ALICE" won the Media in Space Category at the 27th Stuttgarter Filmwinter. In 2015 Kühfuß got a studio grant from the City of Stuttgart, which will last until 2019. In 2016 the Solo Show "THE CONCRETE TURN" was funded by the LBBW-Stiftung. From 2012 till today Kühfuß gives lectures for the new Media Class at the FKN. In 2015 he took over the leadership for the class from Ulrich Wegenast. 2013 Kühfuß did a Shortfilm workshop in Harare, Zimbabwe, together with Thomas Ch. Weber and Frieder Schlaich. In 2015 he did workshops for the International Festival of animated Film Stuttgart and a one week crash course at the LUS in Leinfelden. http://kuehfuss.com
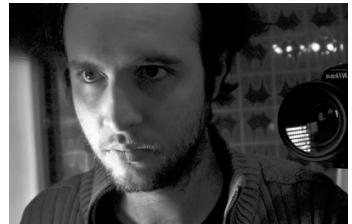
photo by Gion Pfander

RECYCLING YANTRA
by Raphael Perret

The installation 'Recycling Yantra' is on one hand a series of videos, documenting the informal e-waste recycling in Delhi, and on the other a contemporary interpretation of the tantric symbol 'Smara-hara Yantra' (Remover of Desire). The videos show how computers are collected, repaired, traded and taken apart over several steps, until all components are fed back into the production of new goods again. This mostly unknown process is taking place in the informal economy and is diametrically opposed to how electronics are assembled in China.

Electronic media are the ground on which modern societies are thriving on and we all know the continuous desire, buzz and excitement for the next version, update, upgrade or release. The yantra, composed of materials collected from the recycling process, is an energy diagram, comparable with a talisman which, in its original meaning, is supposed to help people free themselves from desire and the urges of consumer culture.

photo by Gion Pfander

Raphael Perret is a Zurich based artist, exploring the interplay between physical and virtual spaces, the closing of circles, as well as the examination of value systems. He holds a Bachelor in Interactive Media and a Master of Advanced Studies in Scenography. He has taught at the Interaction Design department of the Zurich University of the Arts. His art projects have been shown worldwide in places like Gwanju (South Korea); Rio de Janeiro and London. http://raphaelperret.ch
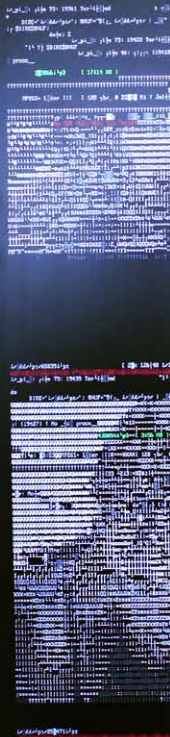
SHELL PERFORMANCE
by Martin Reiche

Shell Performance is an open-source software art installation that transforms an operating system into a performative space. The performance is fueled and heavily influenced by the data that is available on all attached or internal storage devices, so that no performance on two different machines is identical to the other. The underlying software is a Linux shell script that is constantly scanning the contents of the hard drives for images, videos, MP3s and PDF files. In the exhibition setup, Shell Performance is running on the data retrieved from a hard-drive that has been collected on an e-waste dump in Ghana by the art collective KairUs in 2014. Shell Performance questions integrity of data as much as issues of privacy and simulates a digital 'game' being played by the software with the data on the device, highlighting the questionable relationship we have with data and our urge to save everything to protect us from potential losses through malfunctions, which on the other hand leads to our data being accessible by third parties around the globe. Shell Performance is understood as an artwork and not as code, therefore it is released under CC-BY-SA-4.0 license.

Martin Reiche is a media artist living and working in Berlin, Germany, and is regularly presenting on professional computer science and digital art and gaming conferences. His artistic work has been shown at numerous festivals and museums around the world, including ZKM Museum of Media Art, ZKM Museum of Contemporary Art, Athens Digital Art Festival, INCUBARTE Art Festival Valencia, ETDM Estonian Museum of Applied Art and Design Tallinn and A MAZE. Festival Berlin. http://martinreiche.com

photo by Isaac Gee

HEADCRASH
by Michael Wirthig

The most interesting thing of these hard-drives is the magnetic disc itself. It is the physical place where all kind of personal data is saved on. In former works I've made various studies about the relationship between inner and outer worlds. Therefore I dissected the hidden world of a number of different appliances to turn them inside out, e.g. disassembling objects, machines and herbal structures. For 'Headcrash' I extracted the discs of 2 Ghana hard-drives and explored the surface with a microscope. 1500 photos of the inside and outside influences of the discs, like scratches or dust result in a 1 min tour de force about the inner world of these Ghana drives.

Michael Wirthig (AT) is since 2000 active with art photography and experimental film. He is interested in the breakdown of objects, machines and herbal structures and did various studies on the relationship between the inner and outer worlds.

MAPPING THE SMART WORLD
Collaborative work of exhibiting artists

'Mapping the Smart World' examines the life cycles of consumer electronics and network technologies. Starting from the mining of minerals through refining of elements to production of metal alloys, magnets, components and assembly of consumer goods of our 'smart world'. Further the project maps data centers that hold a key position in our everyday use of our devices. In the end of the life cycle electronic waste becomes once again a source of raw materials such as metals and plastic. By mapping the key locations for mining, refining, production, storage and the urban mining of e-waste we want to bring forth the complex chains of development and production that enables our networked lives. The 'Mapping the Smart World' reveals locations of both stunning R&D, increasingly effective use of resources as well as dystopian working conditions and ecological disasters. Exhibited is a first version of this research in progress, an interactive map, realised during the 'Mapping the Smart World' ArtLab as a part of the 'Vorbrenner' 2016 program at the 'Freies Theater Innsbruck'.

VORBRENNER – the lab for experimental and interdisciplinary art forms – facilitates the realization of trials, work processes and experiments. VORBRENNER is located in the rooms of the 'Freies Theater Innsbruck': http://www.vorbrenner.at.

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