22 hard drives from a west African e-waste dump - Behind the Smart World

Workshop Transmedia matters, Basel/Switzerland, Nov 3-4, 2016

Linda Kronman, Andreas Zingerle (KairUs Art collective)

KAIRUS Art + Research

Started 2010 by Linda Kronman and Andreas Zingerle

Artistic works around the thematic of trust, Internet fraud and vigilante communities.

www.kairus.org

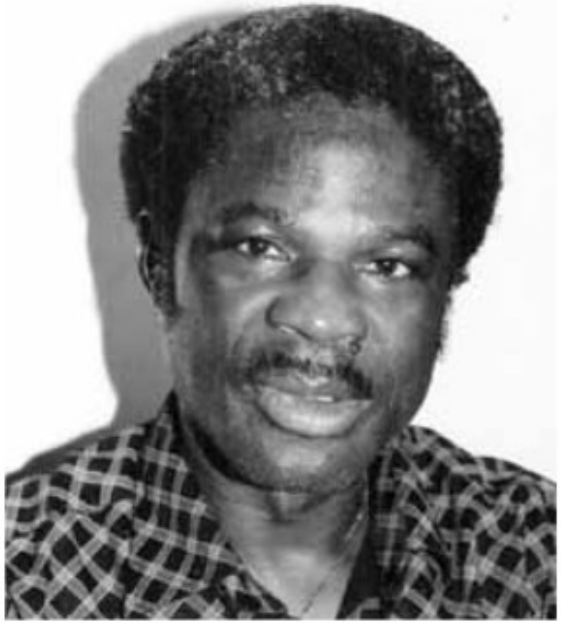
Re: Dakar Art Festival
"The Bookkeeper"
Toni v.d. Alm | Secretary
Dr. Peter Irrthum | Galerist
Heidi Humpfburg | Artist
Mr. Kaba Yassar | Accounter
Mr. Diallo | Hotel booking
Mr. Ibrahim | Insurance
Ms. Astou | Travel agent
Ms. Mariama Sy | Organizer
A transmedia installation that documents the process of a new art scam form.
facebook
flickr
Google
LinkedIn
WordPress
YAHOO!
YouTube
Broadcast Yourself

TOP 3 BUSINESS SEGMENTS
326
LOGISTICS AND TRANSPORT

Motivation:

- Working with thematic Internet fraud
- Artist in residency in Ghana
- Articles about e-waste criminals illegal dumping of e-waste.

GHANA: Internet criminals cash in on e-waste dumping



Award winning journalist George Sydney Abugri

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Award winning Ghanaian journalist GEORGE SYDNEY ABUGRI has been exploring the link between internet crimes and e-waste dumping in Ghana. Kindly reproduced under permission, this is an extract from his paper.

Understanding cybercrime in Ghana: A view from below

by Jason Warner, Harvard University

Research questions:

- Can recover any data from the hard drives?
- Can it be (ab)used?
- What do we have to condider when we use the material as found footage for artistic production?

Tamale
GHANA
Accra

Export of e-waste
NORTH AMERICA
WESTERN EUROPE
EASTERN EUROPE
CHINA
INDIA
EGYPT
SENEGAL
IVORY COAST
NIGERIA
GHANA
BENIN
PAKISTAN
VIETNAM
HONG KONG
From North America
From Western Europe
Source: Greenpeace, Basel Action Network

Top Ten Toxic Threats in 2013

- Agbogbloshie Dumpsite, Ghana
- Chernobyl, Ukraine
- Citarum River, Indonesia
- Dzerzhinsk, Russia
- Hazaribagh, Bangladesh
- Kabwe, Zambia
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BBC – E-waste recycling in Ghana, West Africa

WD400

13 Desktop hard drives (3.5”)
9 Laptop hard drives (2.5”)

4: Hitachi, Fujitsu, Western Digital
3: Maxtor, Seagate
1: Samsung, HP, Toshiba, IBM

Oldest production date: March '97
Newest production date: March '08

Ranging from 644MB to 160GB

Social engineering method: 'Dumpster Diving'

Wikipedia defines dumpster diving as: “the practice of sifting through commercial or residential trash to find items that have been discarded by their owners, but which may be useful to the dumpster diver”.

The main reason for dumpster diving is for the acquisition of information.

As students, Bill Gates and Microsoft co-founder Paul Allen went dumpster diving to try and get source code.

Once, they found a printout of the TOPS-10 (Timesharing OS) source code, and it unlocked a lot of secrets.

Practices of found footage and media archeology:

Artists gather source material from thrift stores, garage sales, flea-markets and dumpsters.

Methodologies

- Planned as a 'data-recovery' workshop
  - → servus.at+fundings = research lab
- DIY recovery session using FLOSS tools
- Artlab with symposium by experts + 10 artists from various backgrounds

HD17
HD18
HD16
HD04

Out of 22 hard drives:

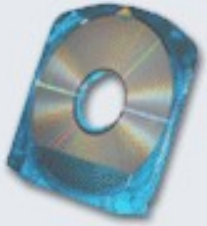
- 3 were immediately accessible with data on them.
- 2 were recovered by us with open source tools 'photorec' and 'testdisk'.
- 1 was (so far) recovered by technicians from Datenrettung ECS-Solutions

Hard Drives
SCSI / IDE

Raid Servers

Desktop PCs,
Laptops and Macs

CD / DVD



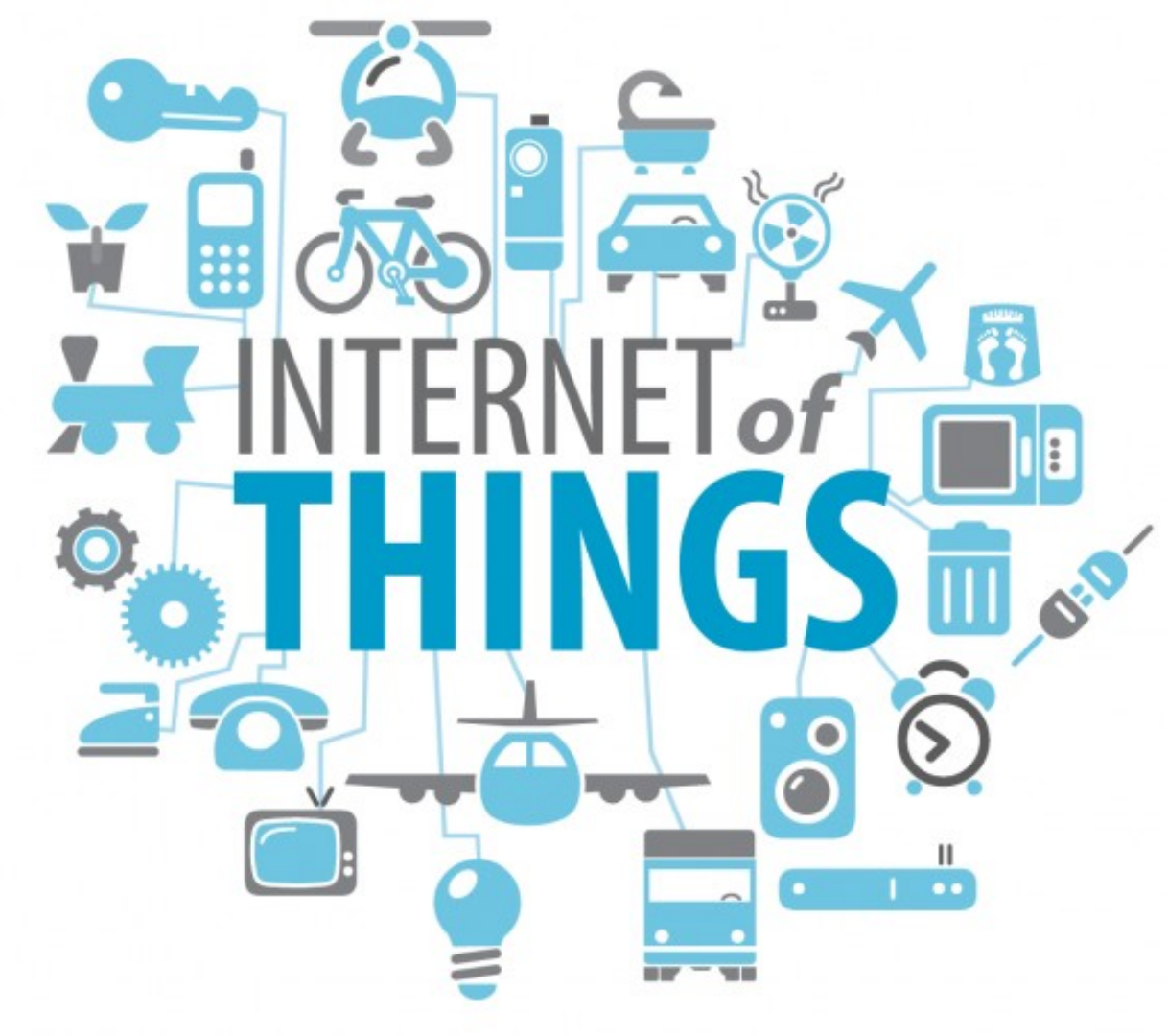
Digital Devices

Memory Sticks

Floppy Diskette

Smart Media

Tape Media


INTERNET of
THINGS

SHOP SERVICE MEIN T-MOBILE LOGIN

Suchbegriff hier eingeben ...

JUHU! Jährlich Unkompliziert Handy Upgraden.

Mit dem JUHU!-Zusatzpaket alle 12 Monate ein neues Smartphone aussuchen.

Auf Wunsch altes Handy eintauschen und Restwert anrechnen lassen.

Dank JUHU! immer mit dem neuesten Smartphone telefonieren und surfen.

How does the 'Internet of things' affect our privacy?

What data breaches can be found on electronic waste dumps?

What is the value of disposed data?

BEHIND THE SMART WORLD

WHAT IS THE VALUE OF DISPOSED DATA?

THURSDAY, MAY 21, 19:00

INTRODUCTION: "BEHIND THE SMART WORLD" RESEARCH LAB
LINDA KRONMAN & ANDREAS ZINGERLE (KAIRUS.ORG & SERVUS.AT)

CAN SINIRTAS (ECS GLOBAL, DATA RESCUE)

FIEKE JANSEN (TACTICAL TECHNOLOGY COLLECTIVE, DATA BROKERS)

DR. MICHAEL SONNTAG (JOHANNES KEPLER UNIVERSITY LINZ, DATA FORENSICS)

Q&A

OPEN DISCUSSIONS & DRINKS

BEHIND
THE
SMART
WORLD
Behind the Smart World – Art Meets Radical Openness Artlab 2015

SMART
WORLD
ind the Smart Wo
Meets Radical Openness Ar
015
May 21st, Fri., May 22nd at
M GOETHESTRASSE XTD, Linz, Austria
KUNST

BEHIND THE SMART WORLD

ARTISTS PRESENTATIONS:

EXPLORING HARD DRIVES

FRIDAY, MAY 22, 17:00

ARTISTS PRESENTATIONS

EMÖKE BADA (HU), PIM ZWIER (NL), LILIAN BEIDLER (CH), MICHAEL WIRTHIG (AT)

BREAK

ARTISTS PRESENTATIONS

JOAKIM BLATTMAN (NO), MARIT ROLAND (NO), SIMON KRENN (AT), MATTHIAS URBAN (AT), FABIAN KÜHFUSS (DE)

OPEN DISCUSSIONS & DRINKS

Take away from the artlab

1.
Work with people you trust,
and are interested in the project as well.

2.

- Data set should have been sent out earlier
- data was raw = viruses

3.

- learning from the experts, excursion, discussions was good for the participants
- briefing: communicate expectations better

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- learning from the experts, excursion, discussions was good for the participants
- the experts made the artists very cautious
- briefing: communicate expectations better

4.

- Outcome of the artlab was not met completely and we shifted to broaden the topic and work with artists that did projects around “saving-deleting-resurfacing” of data.

BEHIND THE SMART WORLD ARTLAB – ARTISTIC STRATEGIES FOR DEALING WITH RESURFACING DATA

by KairUs - Linda Kronman and Andreas Zingerle

Breaches of Western information security thanks to a rise in electronic waste circulation have been particularly pronounced in Ghana, where a certain cadre of citizens has taken to searching out information on Westerners' old hard drives for extortive purposes.[1]

Since 2010 we as KairUs artist duo have focused on researching topics such as spam, scam and Internet fraud. In August 2014 our research had evolved to the stage that we needed to take a field trip to West Africa, where a considerable number of so called advance fee fraud originates. Rather than hunting down scammers in Internet cafés, we were interested to see which technological affordances or limitations the scammers were faced with in this part of the world. In our initial research we came across reports about an electronic waste dump called Agbogbloshie. In the middle of Ghana's capital Accra, in this toxic wasteland by a lagoon, is where our electronics from developed countries are illegally dumped. Jennifer Garbys examines in her book *Digital Rubbish*[2] in detail how electronic waste ends up at e-waste dumps such as Agbogbloshie: first they linger in

1 Jason Warner, Understanding Cyber-Crime in Ghana: A View from Below, 2011 International Journal of Cyber Criminology (IJCC) ISSN:0974 - 2891 Jan - July 2011, Vol 5 (1): p. 736-749.

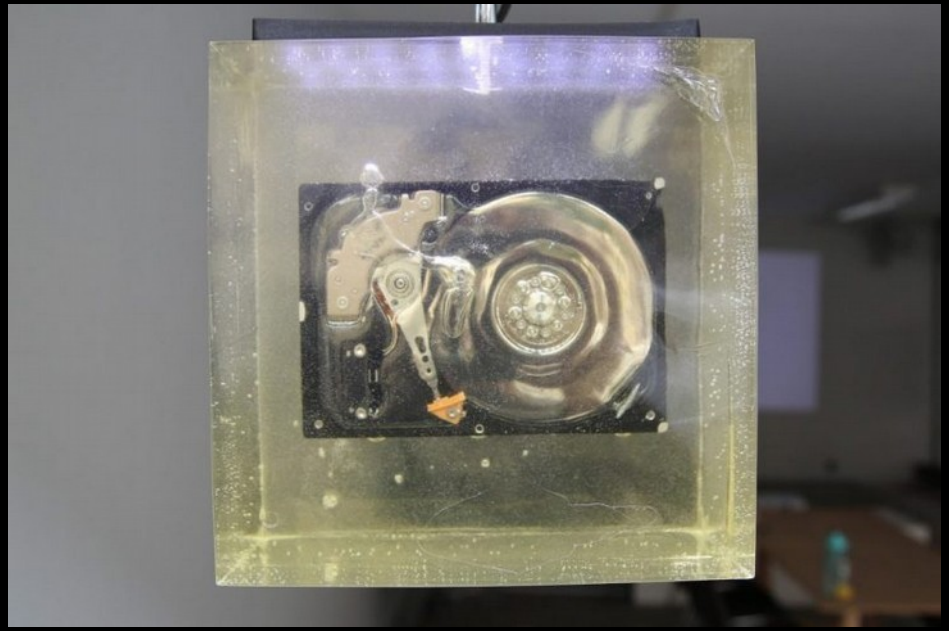
2 Jennifer Garbys, Digital Rubbish: a natural history of electronics, USA: University of Michigan Press, 2011

Presentation at conferences

- ISEA 2015, Vancouver/Canada
- 32C3 Chaos Communication Congress, Hamburg/Germany
- Stuttgarter Filmwinter, Germany
- xCoAx conference Bergamo/Italy

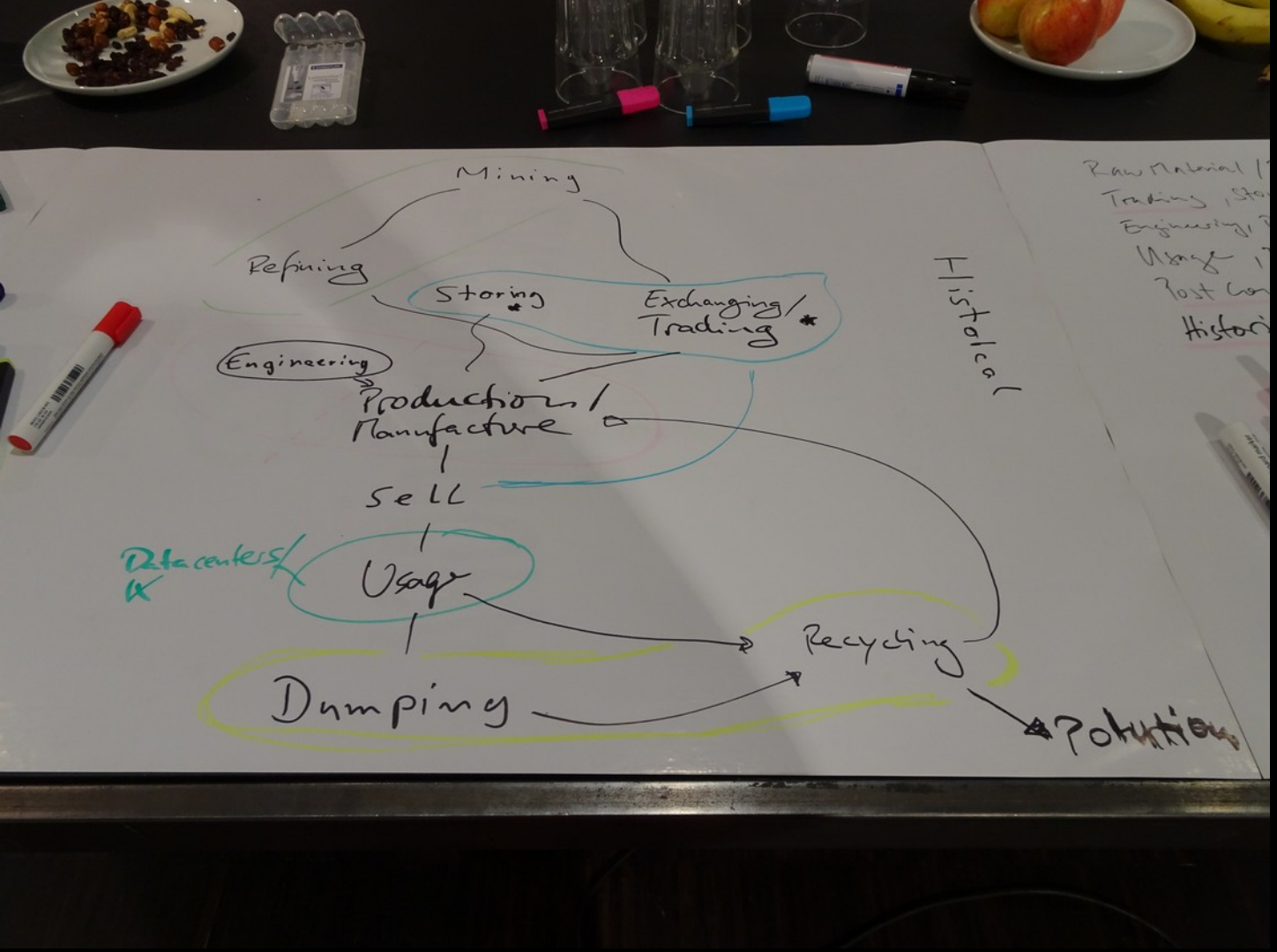
WASTE(D)!
25.05-28.05.2016
ART MEETS RADICAL OPENNESS, LINZ
FESTIVAL DEDICATED TO ART, HACKTIVISM AND OPEN CULTURE
www.radical-openness.org

DEFAULT SETTINGS



325
PART
A

Mapping the smart world



Categories:

- Mining
- Trading
- Producing
- Consuming
- Dumping
- Historical

Linda Kronman & Andreas Zingerle (KairUs),
Fabian Kühfuß, Raphael Perret, Martin Rei
MAPPING THE
SMART WORLD
ARS ELECTRONICA
Trading: Nhava Shava Port

Dumping: Agbogbloshie
Agbogbloshie is one of the biggest and most toxic e-waste dumps in the world situated on a former wetland (Korle Lagoon) in Accra the capital of Ghana. It is a center of legal and illegal exportation of electronic waste. Here lands e-waste from USA, Europe and Australia to be salvaged by locals who put their health to risk for mining gold, copper, aluminum and other valuable components from our consumer electronics. Computer components such as hard-drives, processors and motherboards are extracted and sold

Take away from the workshop

- people already know each other, aware the thematic
- expectations were clear and communicated
- clear outcome → mapping presented at ars
- no possibility to test
- value of labor, metals, scrap
- no artwork -> research method to discover future topics for artistic production.

Outlook:

- plan other exhibitions with the research lab
- plan a 2 week artlab in Spring 2017
- open source web version of the mapping.

Thank you!

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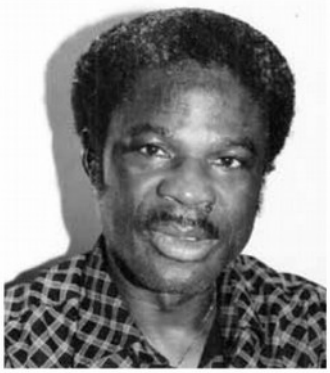

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The Telegraph
Home Video News World Sport Finance Comment Culture Travel Life Women Fashion
Politics | Election 2015 | Investigations | Obits | Education | Science | Earth | Weather | Health
News | Environment | Climate Change | Wildlife | Picture Galleries | Earth Video
HOME » NEWS » EARTH » EARTH NEWS
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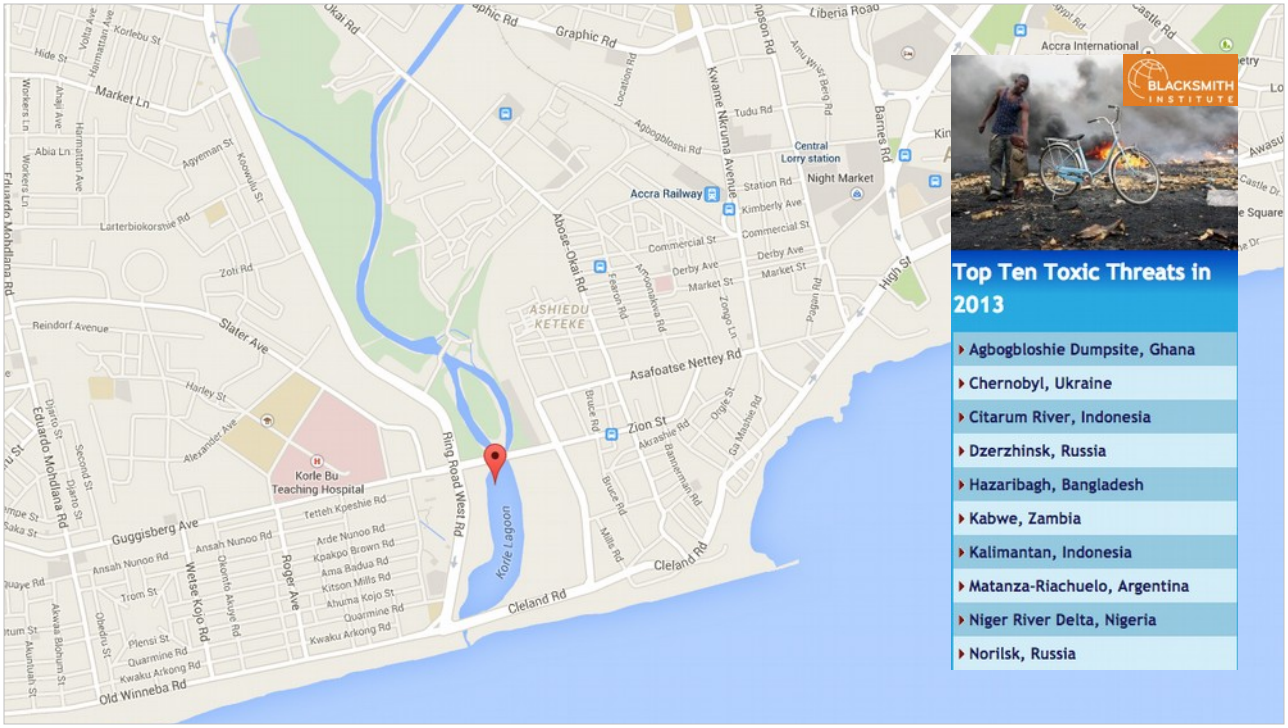

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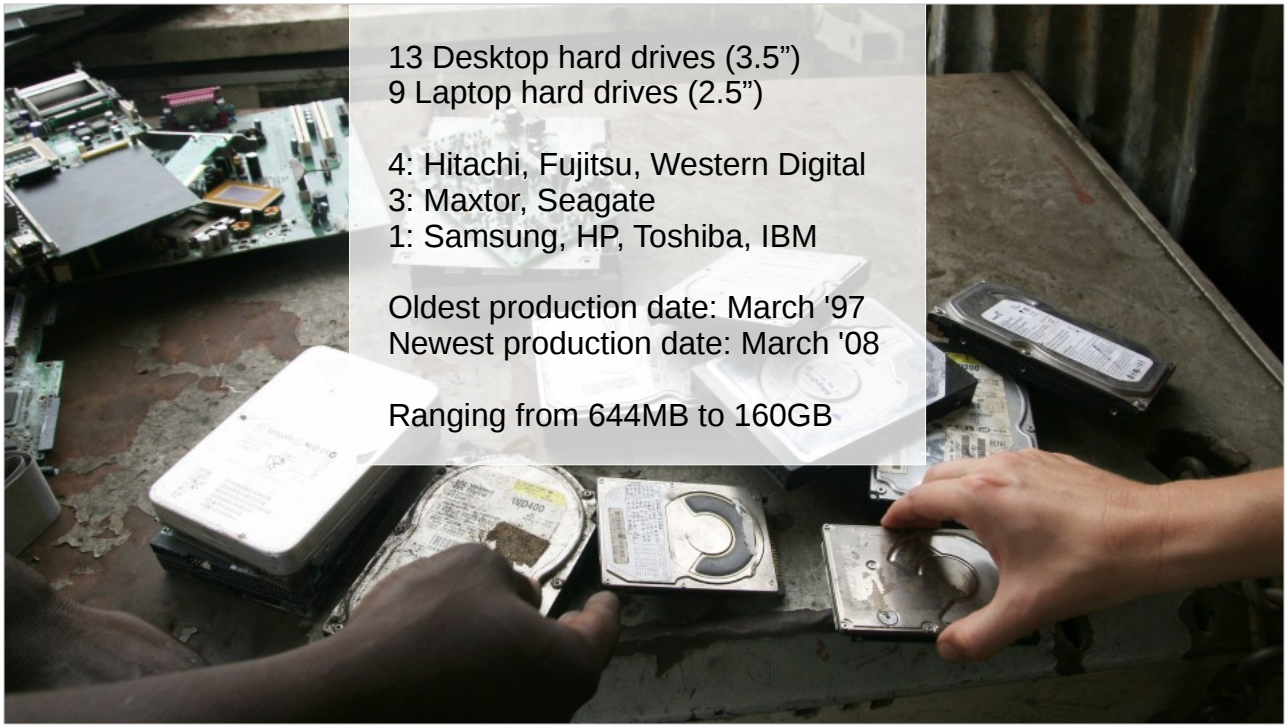

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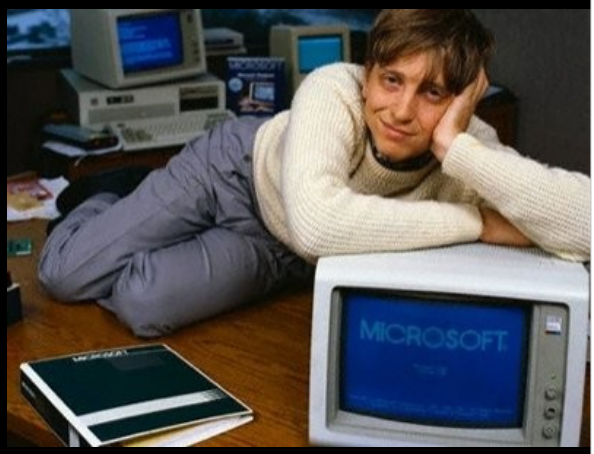

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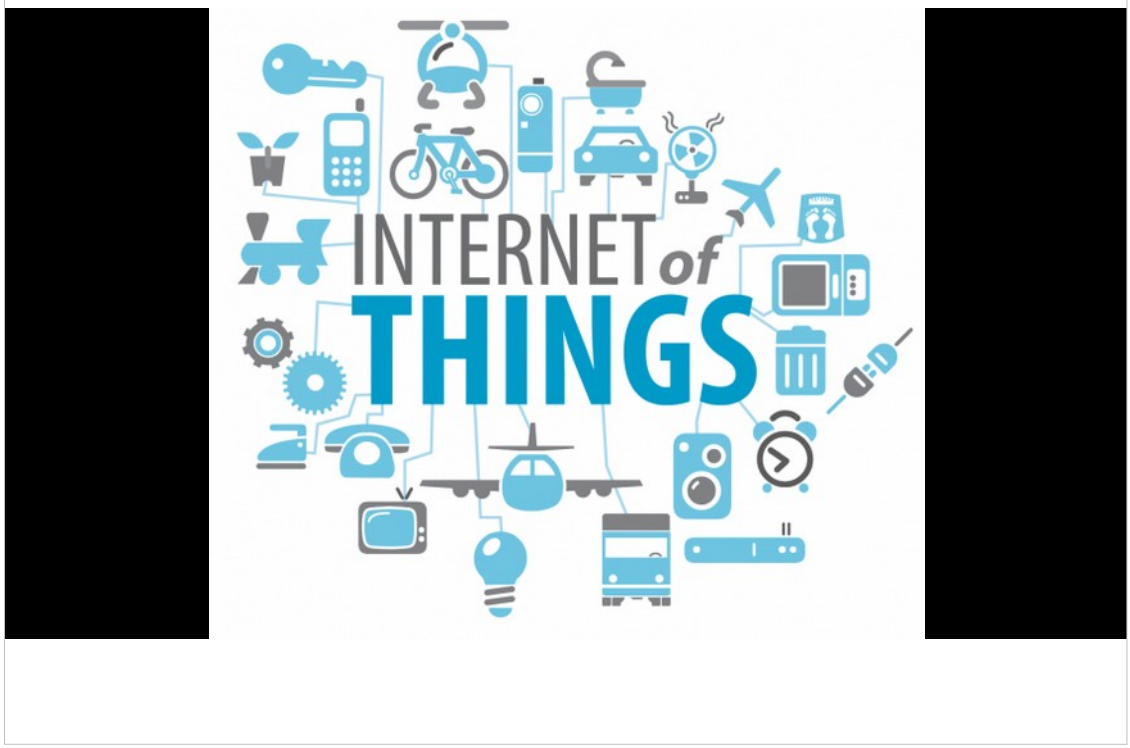
The hard drives are representations for electronical devices that store personal data of us.



This amount of electronics is constantly growing and increasingly monitoring our everyday lives. Even if data is stored in the 'cloud', it is still stored on a physical storage medium.

Recycling schemes enable us to to stay up to date with the newest gadgets.

Planned obsolescence result in short life cycles of our electronics.

In the end a lot of our data is recycled with the physical objects.

How does the 'Internet of things' affect our privacy?

What data breaches can be found on electronic waste dumps?

What is the value of disposed data?

For this artistic research Lab, we invited artists and experts to talk and discuss around questions such as:

The upcoming program of today will be three talks from experts:

CAN SINIRTAS from DATENRETTUNG ECS Solutions talking about DATA RECOVERY.

FIEKE JANSEN from TACTICAL TECH COLLECTIVE talking about DATA BROKERS.

Unfortunately on a short notice Uwe Sailer informed us that we cannot make it today due to a court case. Yet we are happy that Dr. MICHAEL SONNTAG FROM the INSTITUTE OF NETWORKS AND SECURITY AT JKU will be

BEHIND
THE
SMART
WORLD

SMART
WORLD

Tomorrow starting 5 o'clock we will have our artists presentations.
(Please alll stand up briefly so that people can see you!)

Emöke Bada from HUNGARY

Pim Zwier from THE NETHERLANDS

Lilian Beidler from SWITZERLAND

MARIT ROLAND AND JOAKIM BLATTMANN from NORWAY

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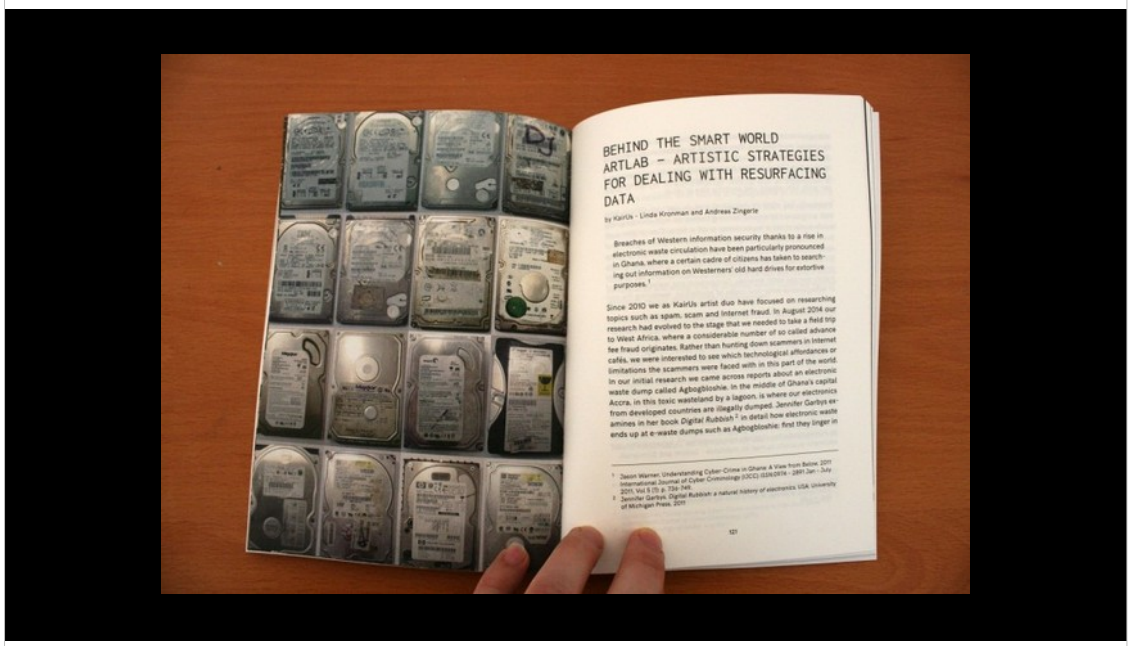

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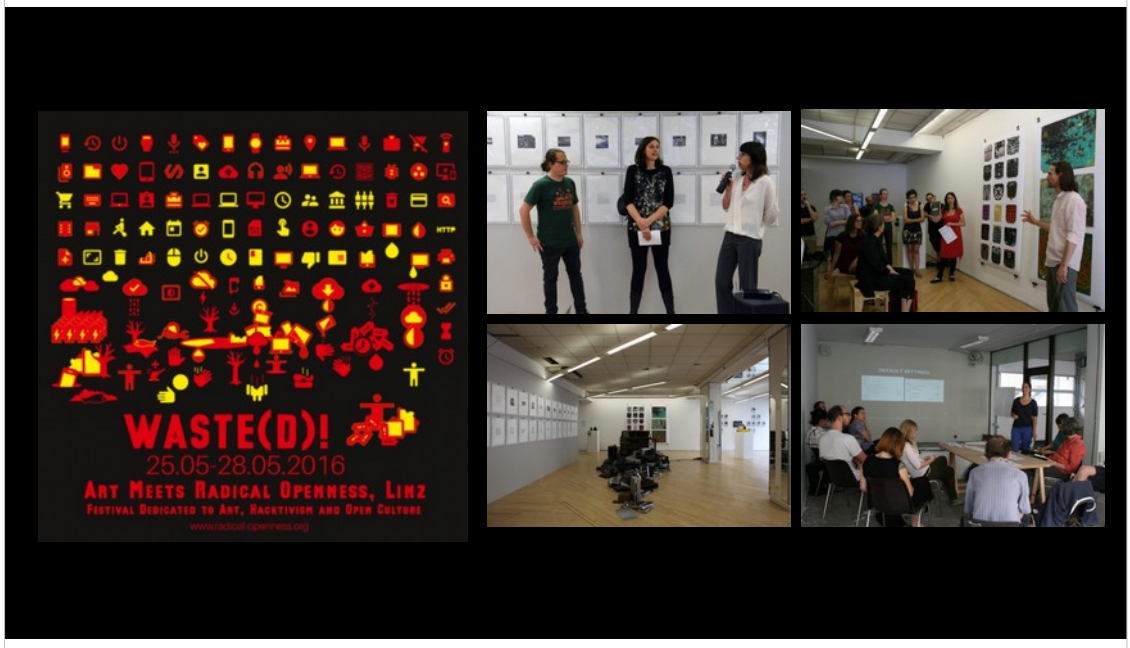

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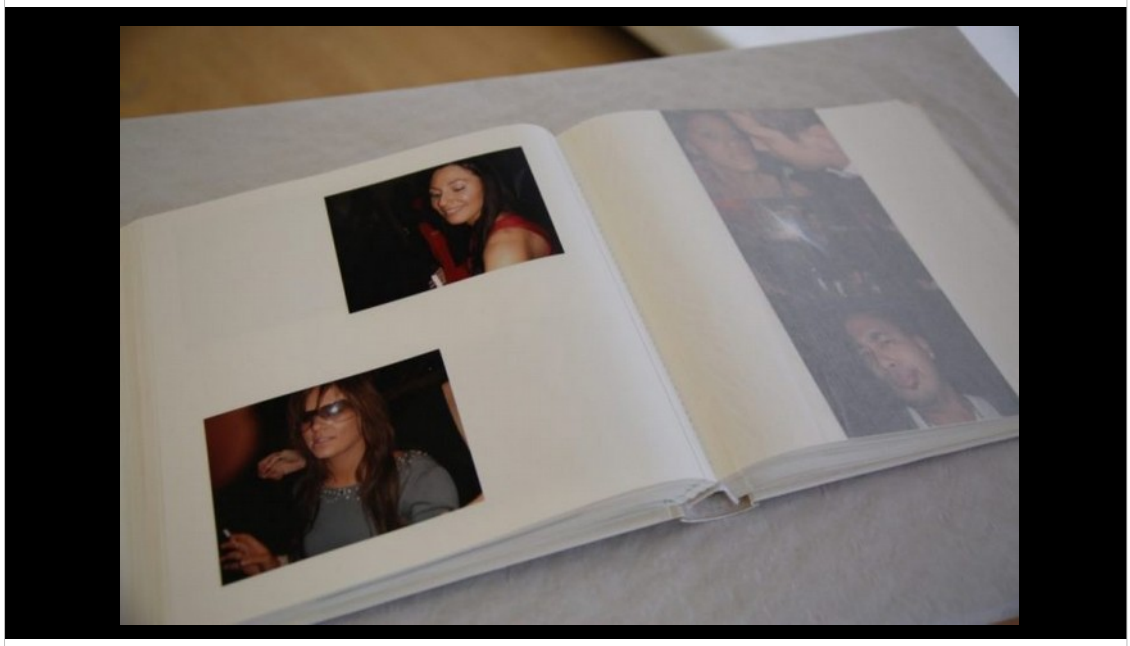
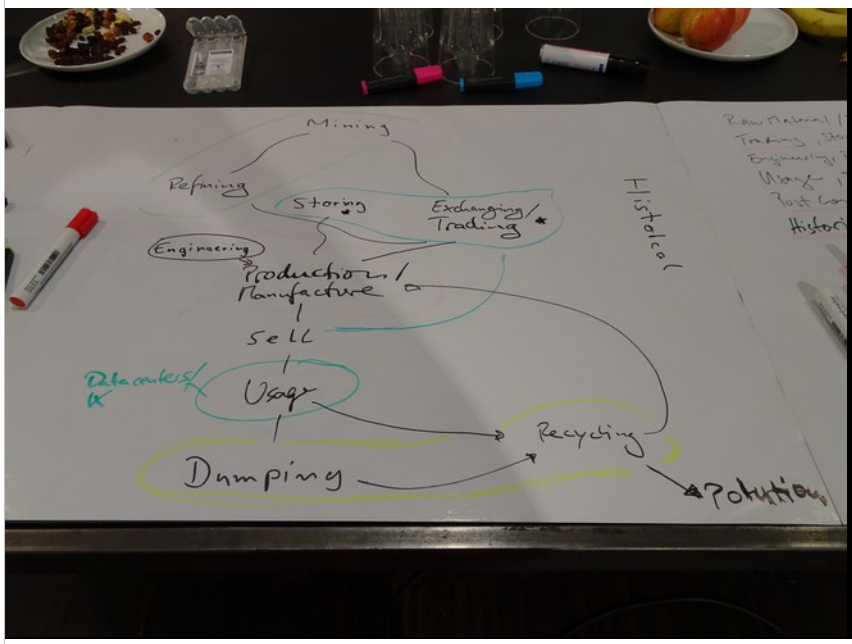


Cast 325
PART
A

Mapping the smart world



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