The Naked Phone

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ETH Zürich / Corebounce
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Contents

- About Corebounce Association
- The Soundium Multimedia System
- Earlier Performances and Installations
- Rip My Disk

Corebounce

Corebounce

Objectives

- Mediating between Art and Science
- Our approach:
  - deliver tools to bridge the gap

- Artists and scientists live in different worlds and speak different tongues

- Although great art can be realized with poor tools, good tools
  - sustain the artistic flow
  - give more freedom
  - give more expressiveness

→ Software is one of the most powerful tools today
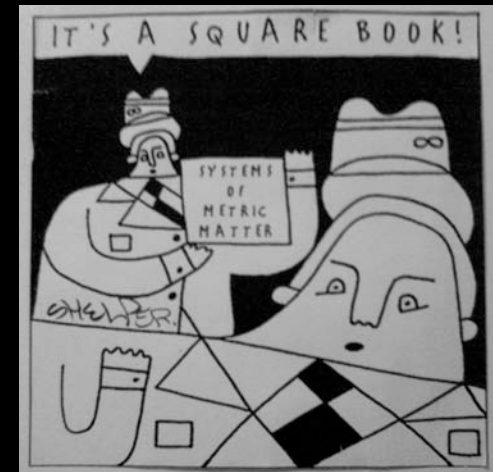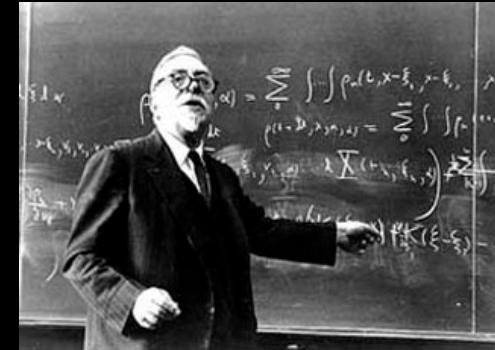
Corebounce

Why do we write our own software...

    ...to create our own art
    ...to be flexible
    ...to be quick
    ...to be in total control
    ...to explore and contribute
    ...because off-the-shelf components
      seldom exist and fit

Corebounce

Collaborations

- ETHZ
- UNIZH
- UNIFR

- Swisscom
- Central Pictures
- Architectures Générales

- Various artists, clubs, museums

Soundium

Soundium

What is Soundium?

- Corebounce's key software system
- Currently in its 3rd incarnation
- Simple integration of multimedia content, image and audio processing, any chunk of hardware
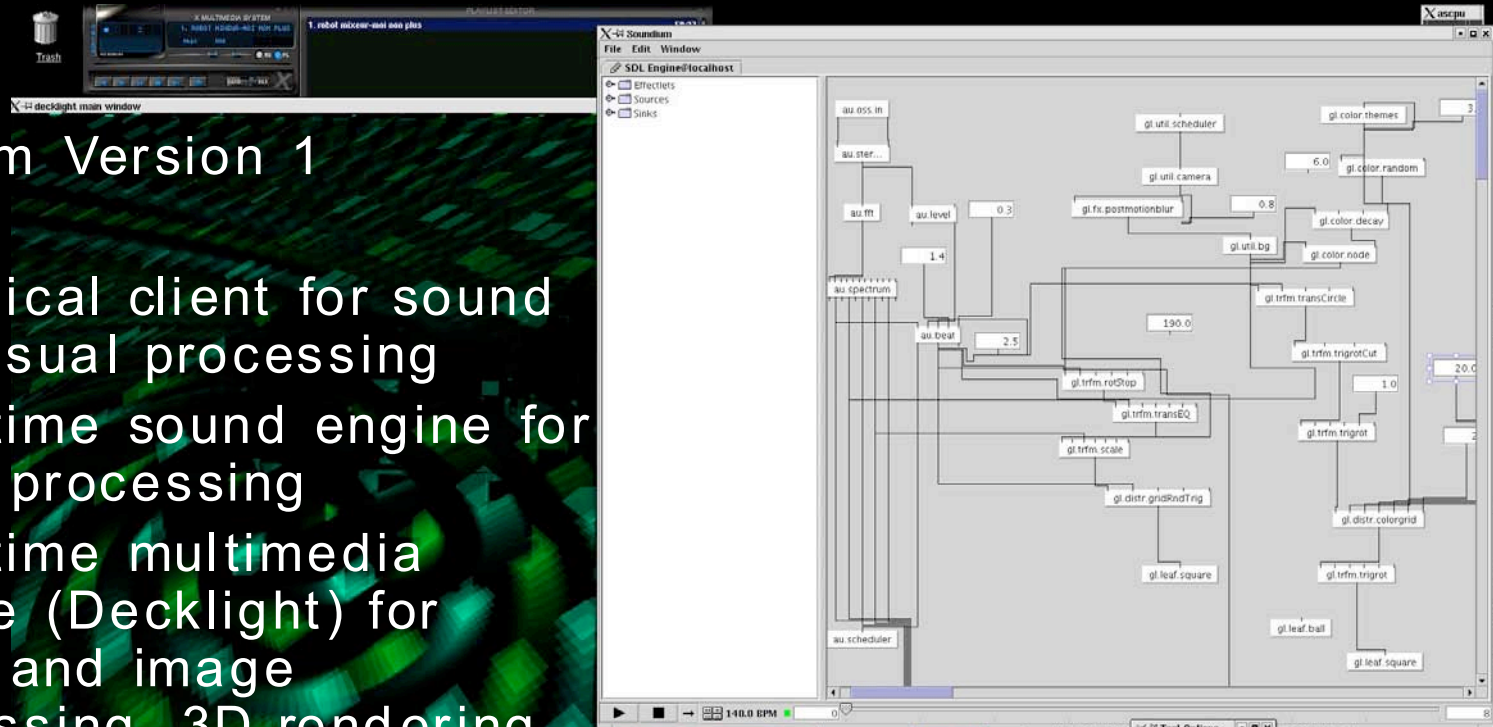
Soundium Evolution

"Console Visuals" Version 0

- 2001 (…a space odyssey?)

- Audio-driven client-server visual machine with a command line interface

- Written in 6 nights…

Soundium Evolution

Soundium Version 1

- Graphical client for sound and visual processing
- Real-time sound engine for audio processing
- Real-time multimedia engine (Decklight) for audio and image processing, 3D rendering

- GUI similar to Max/MSP
- No design and media management

Soundium Evolution

Soundium Version 2

- Graphical client with many advanced features
- Real-time multimedia engine (decklight) for state of the art audio and image processing, 3D rendering
- Used for > 100 performances and installations
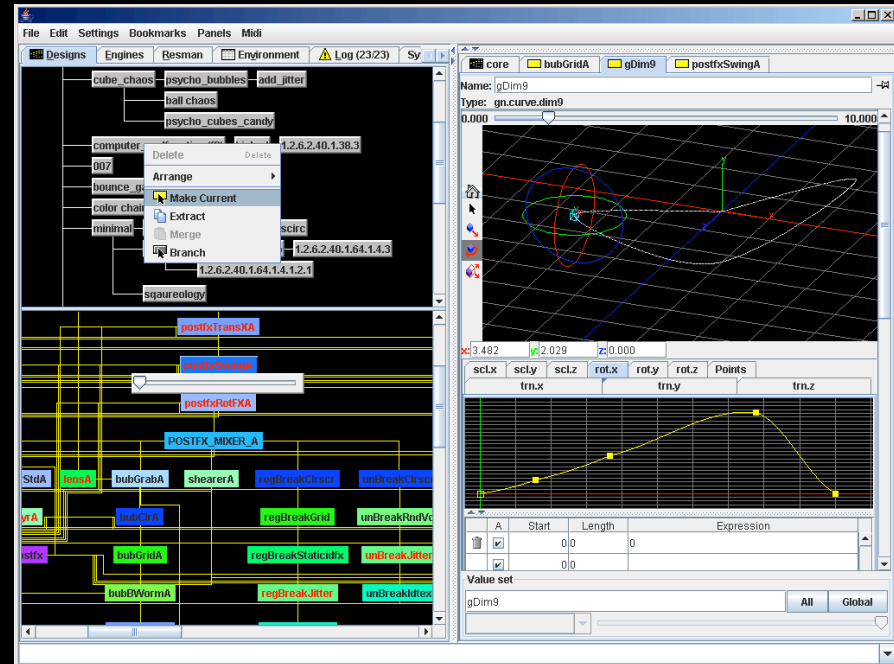
Inside Soundium

Issues we regard crucial for live performance

- ■ "Do anything, anytime"
- ■ Design sophistication
- ■ Media management

Inside Soundium

Do anything, anytime

- Soundium is mainly a live performance tool
- No distinct "edit" / "performance" mode
- Artist can interact at different levels
  - Design
  - Media composition
  - Parameterization

Inside Soundium

Design sophistication

- Artwork is organized an structured in form of the *Design Tree*
- Equivalent usage during preparation and performance
- Changes can be accumulated and committed atomically. Results in new tree nodes, the *Designs*
- Soundium provides operations for design manipulation such as branching, merging, splitting
- Also serves as a multi-level undo-redo mechanism
- Do not deal with files, deal with designs

Inside Soundium

Media management

- Soundium's media manager provides intuitive access to arbitrary media types
- Extensive browsing and searching capabilities
- Semantically correct assignments
- Makes use of (semi-)automatic media retrieval methods
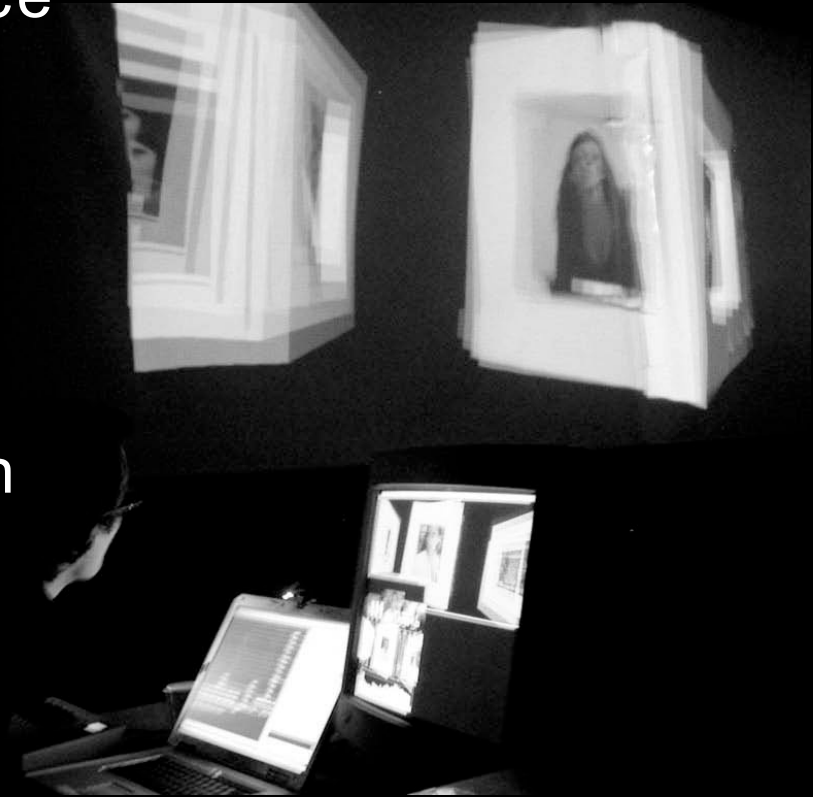- Do not deal with files, deal with content

Media Example

Performances and Installations

Live Visuals for the Dance Floor

- Sub-project of Corebounce
- www.scheinwerfer.li
- Audio and environment-sensitive club visuals
- Unique mixture of video and synthetic elements
- Frequent performances in clubs around the globe
- Interesting experimental platform and audience
- Very active, very successful

Live Visuals – Club

VIDEO

Live Visuals – EEG

- Live visuals for free-jazz
- Difficult to recover musical structure – what about the brain?
- Visuals driven by EEG patterns of free-jazz performer Guerino Mazzola

Live Visuals – EEG

VIDEO

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Live Visuals – Surréance

- ETH's Digital Art Weeks 2005
- Visual adaptation for Art Clay's composition *A River and Five Bridges* for Cembalo (Anne Faulborn)
- Minimal visuals using two color-strips from Paul Klee's *The Twittering Machine* for modulated flickers
- Modulation a combination of automation and live performance

Live Visuals – Surréance
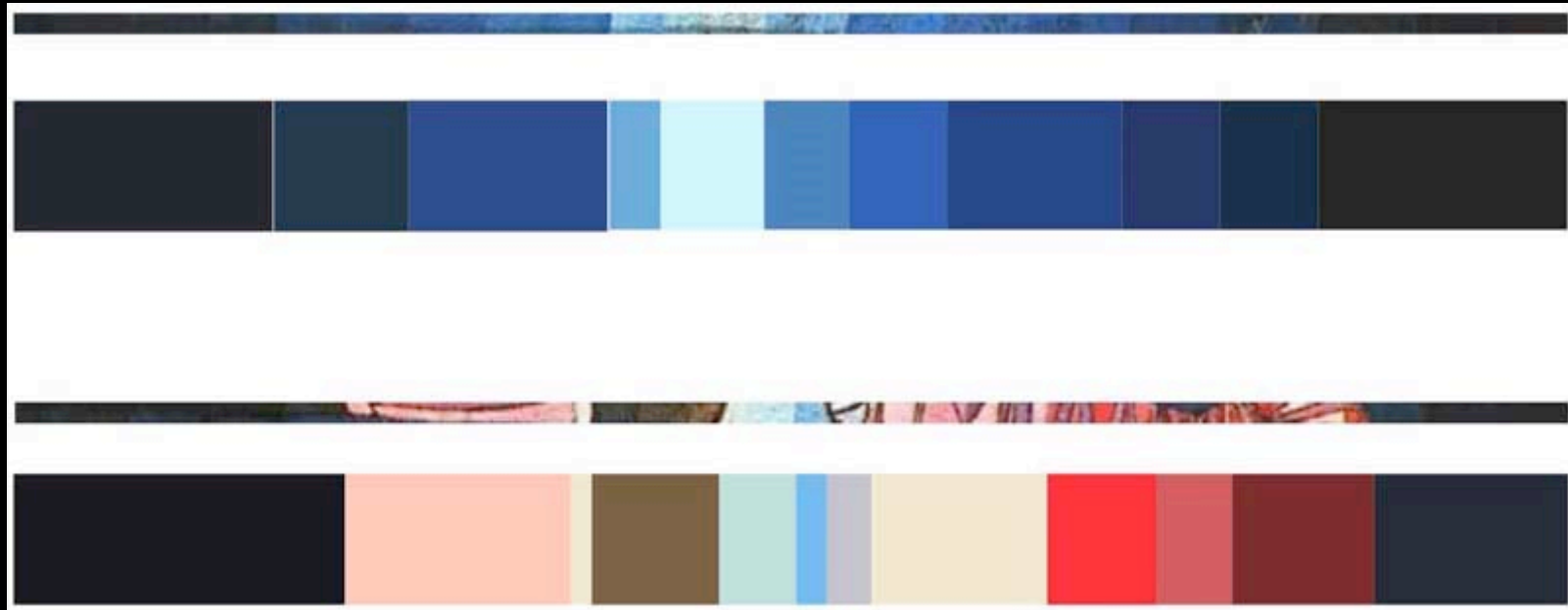
Color strips from Paul Klee's "The Twittering Machine"

Live Visuals – Surréance

VIDEO

Installations – Digital Marionette

- Museum installation
- Interactive, expressive marionette
- Challenges
  - Link classic user interface to digital processing
  - Combine voice with expressive face animation
  - Museum: runs for a long time, uninterrupted, unassisted
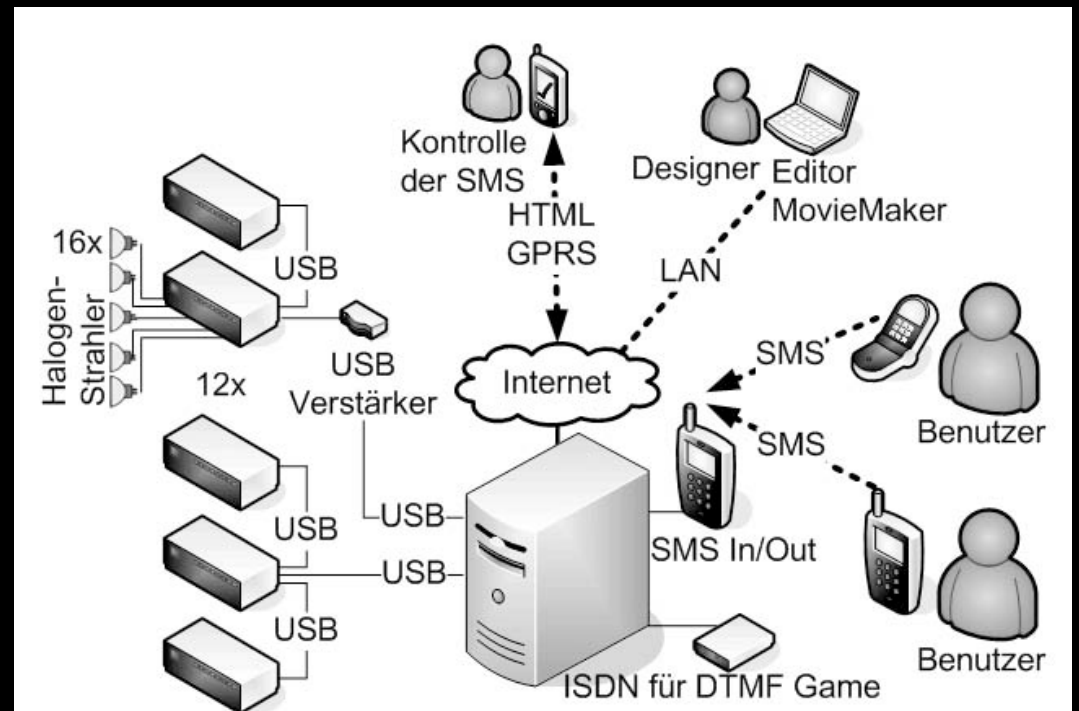
VIDEO

Installations – TowerTalk

- Similar installation by CCC in Berlin
- 192 spotlights on 10'000² feet
- Controlled by phone (SMS and DTMF)
  - Clips
  - Messages
  - Games
  - Real-time graphics
- Challenges
  - Legislation and regulation
  - Hardware
  - Software
  - Operation

Installations – TowerTalk

- ~ 300 Messages / day (19:00-23:00) during 3 weeks
- 3 marriages in first week
- Extensive TV and press coverage

Installations – TowerTalk

# VIDEO

Installations – Rip My Disk

- Private content in a public space
- Blur borders between private use (phone), abuse (clip bar) and reuses (live visuals)
- Interaction on the dance floor is not new
  - Dancing is social interaction
  - Interactive dance club, SIGGRAPH '98
  - Corebounce "Treatment" installation with environmental sensors (pressure, temperature) on the dance floor

- **"The Naked Phone"**
  - Make use of ubiquitous available mobile devices
  - Make use of the private data exposed by these devices

Installations – Rip My Disk

- The features of a Naked Phone:
    - Voice – to noisy on the dance floor
    - SMS – awkward and over hyped
    - MMS – slow, expensive
    - IrDA – not ubiquitous but fun (the invisible ray-gun) and truly naked
    - Bluetooth – convenient but not widely (ab)used

→ IrDA + Bluetooth combined
    …to explore and contribute

Installations – Rip My Disk
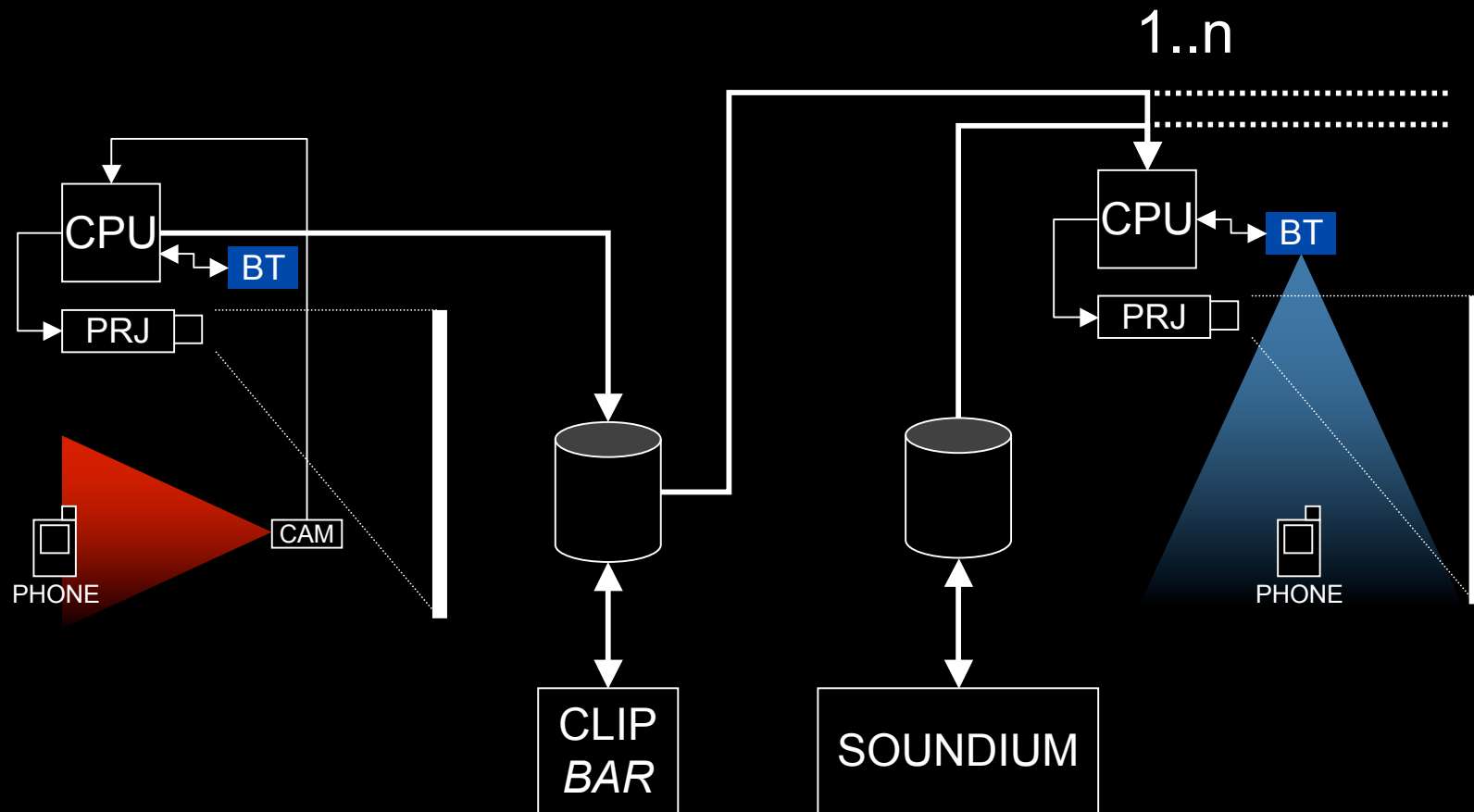
Rip My Disk – The Day After

- Canada is not a geek country
  - Only 1 (ONE) IrDA Phone
  - Bluetooth seems to be rare

- But…
  - Public space causes interaction beyond technology:
    - the "SMS peer" man
    - (ab)use of remote controls
  - Use of technology in public can not be anticipated (camera for „shadow visuals")
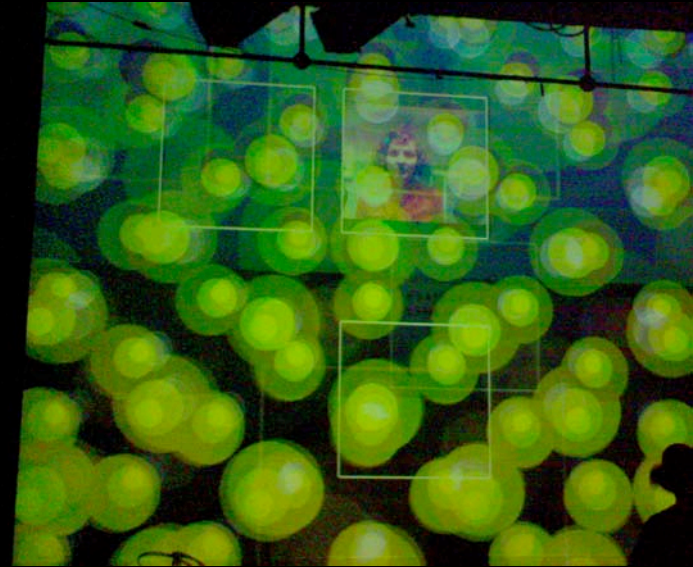
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Acknowledgments

- ETHZ Programming Languages and Runtime Systems Group (Prof. J. Gutknecht)

- ETHZ Computer Vision Laboratory (Prof. L. Van Gool)

- Swisscom Innovations

This was...

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WWW.COREBOUNCE.ORG

WWW.SCHEINWERFER.LI

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