The Impact of Digital Technologies on the Creative Arts

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www.bodydataspace.net
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#bbcclickradio #weinsocialtech

**Our physical and virtual worlds are
blending and merging,
shifting our understanding of**

our identities > *diverse, hyper-enhanced, multi-sensory*

our collaborations > *co-created, immersive, connected*

our innovations > *diverse and inclusive*

**and (finally)
our bodies have become the interface**

This ever expanding
digital eco-system

**is not yet fully understood by anyone, from big business
to the most radical innovators - it is new learning for all**

**The emergent dynamic is one of
COMPLEX PATTERNS OF INTERACTION between
CREATIVE MAKERS AND CREATIVE USERS**

**Our digital selves move through and create, alongside our
physical selves, layer after layer of interwoven,
non linear journeys. Mega data flows extend
from us, to us and all around us - shifting our narratives
and creating new worlds.**

body>data>space

**explores a space where
our physical bodies + our data selves
merge and converge seamlessly**

**We research our live presence alongside our virtual presence,
our avatars and robotic interactions, and the integration of
our gestures and our behaviours**

**We create live immersive experiences, crossing time and space,
where our bodies are the interface**

body>data>space emerged in 2005 from 1990s interactive performance technology collectives shinkansen / Future Physical

A FUTURE where our bodies + our data blend and converge seamlessly

live presence

telepresence

virtual presence

avatars and robotics

wearable computing

motion, sense + gesture tech ++++++

body>data>space
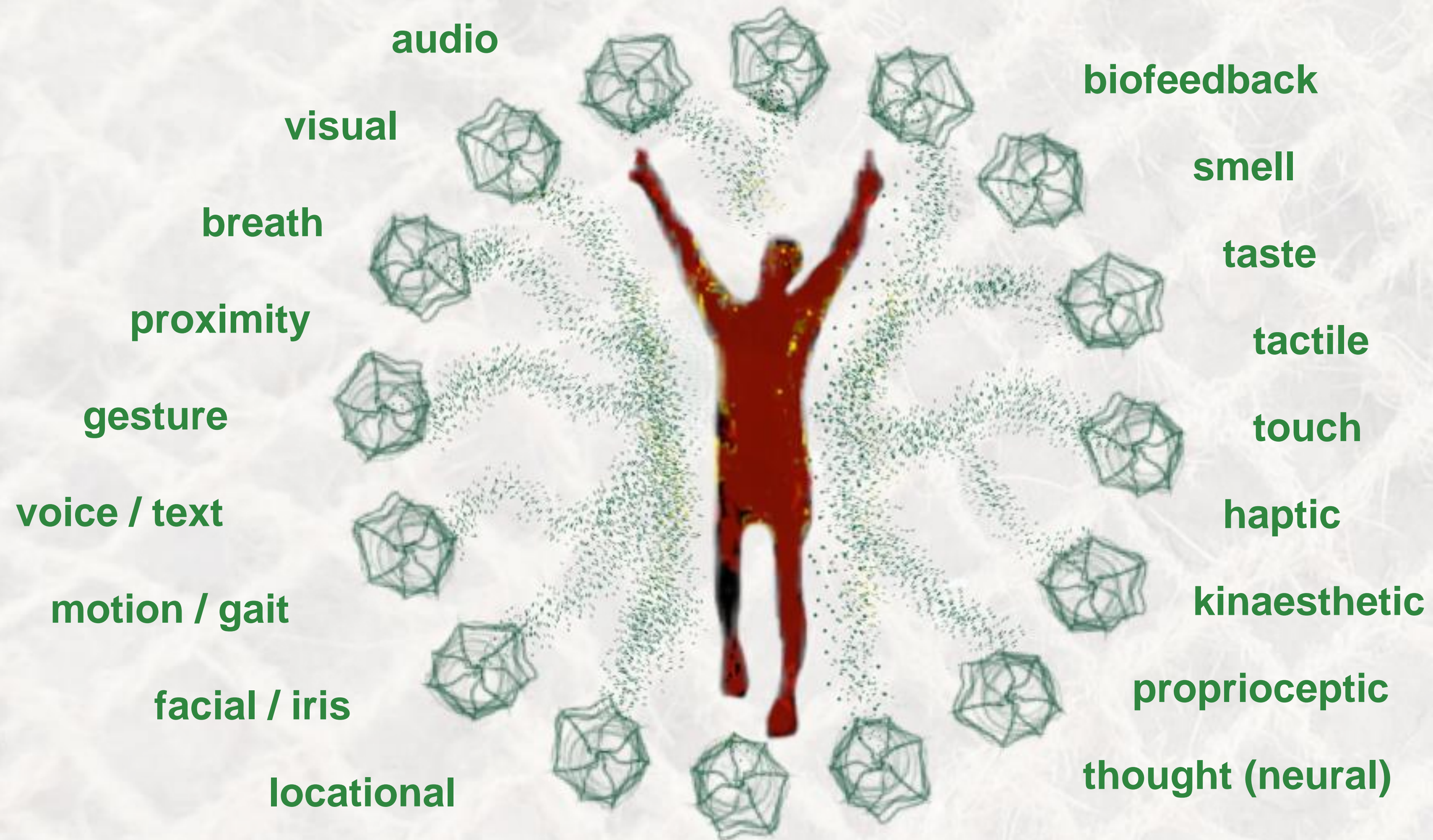
focus on
LIVENESS AND PRESENCE

the unique real time connectivity between humans,
emotions / involvements / belongings / behaviours

We explore the translation of this

NATURAL CONNECTIVITY into DIGITAL CONNECTIVITY

through the creative use of
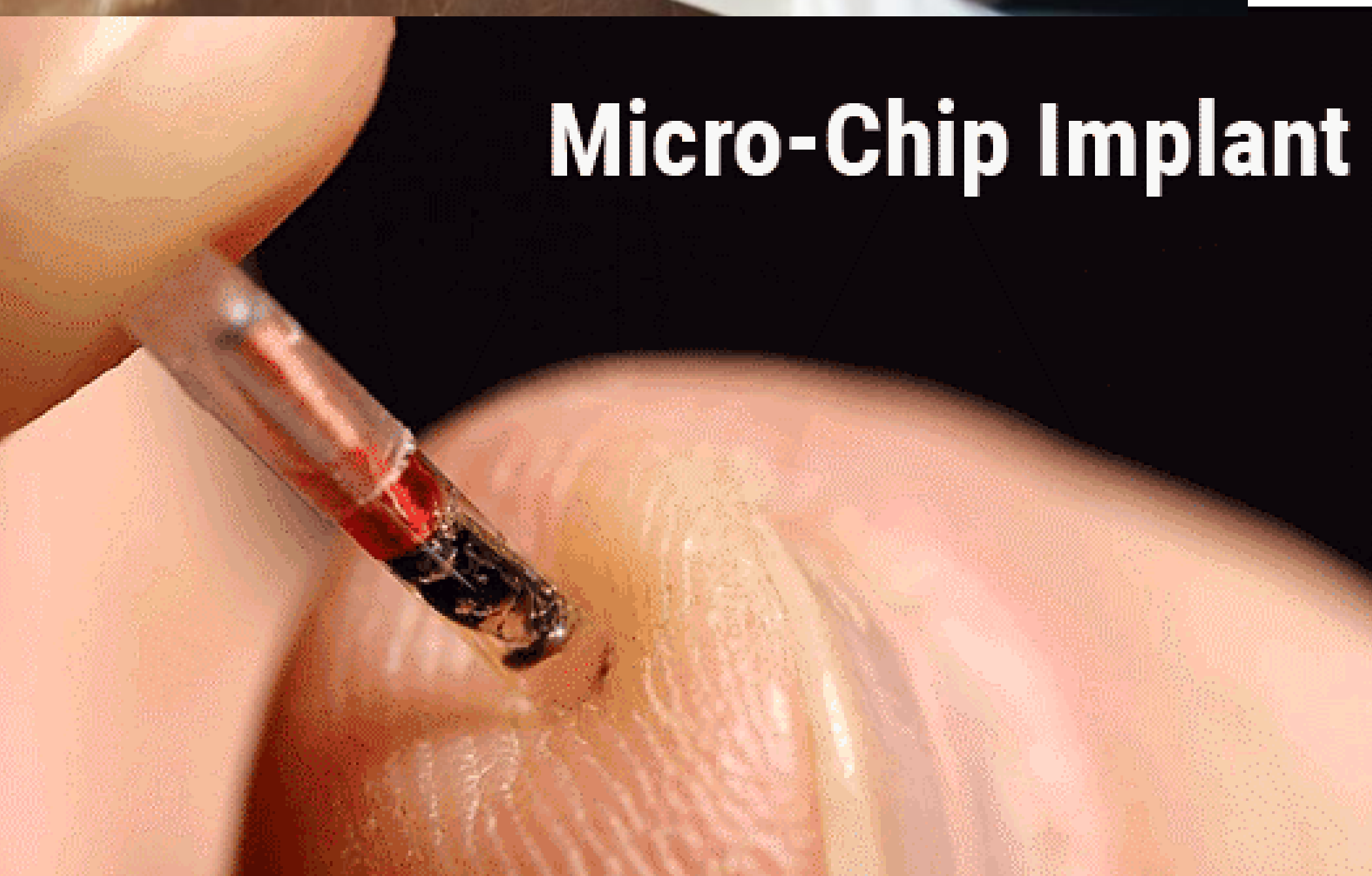**virtual physical blended experiences**
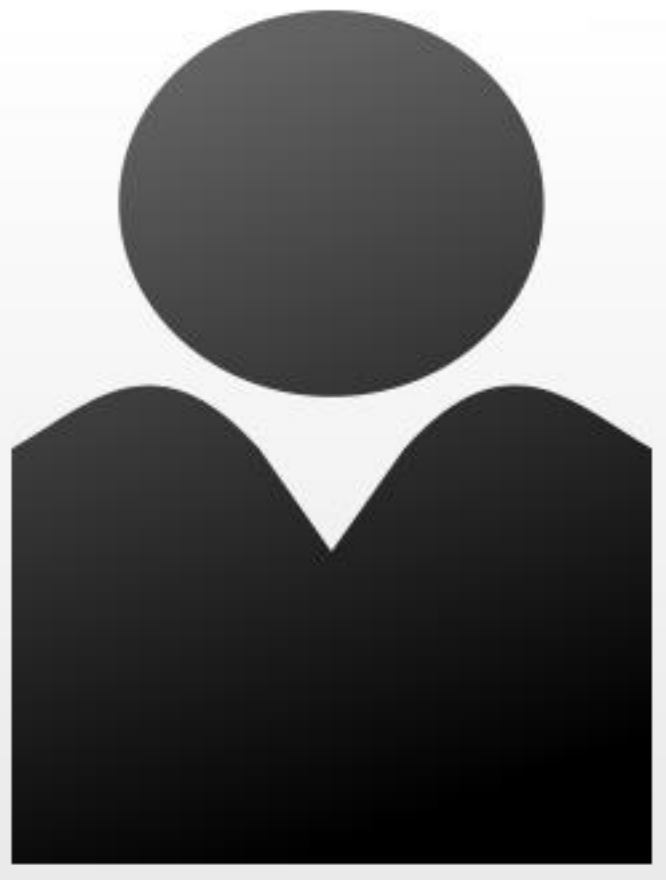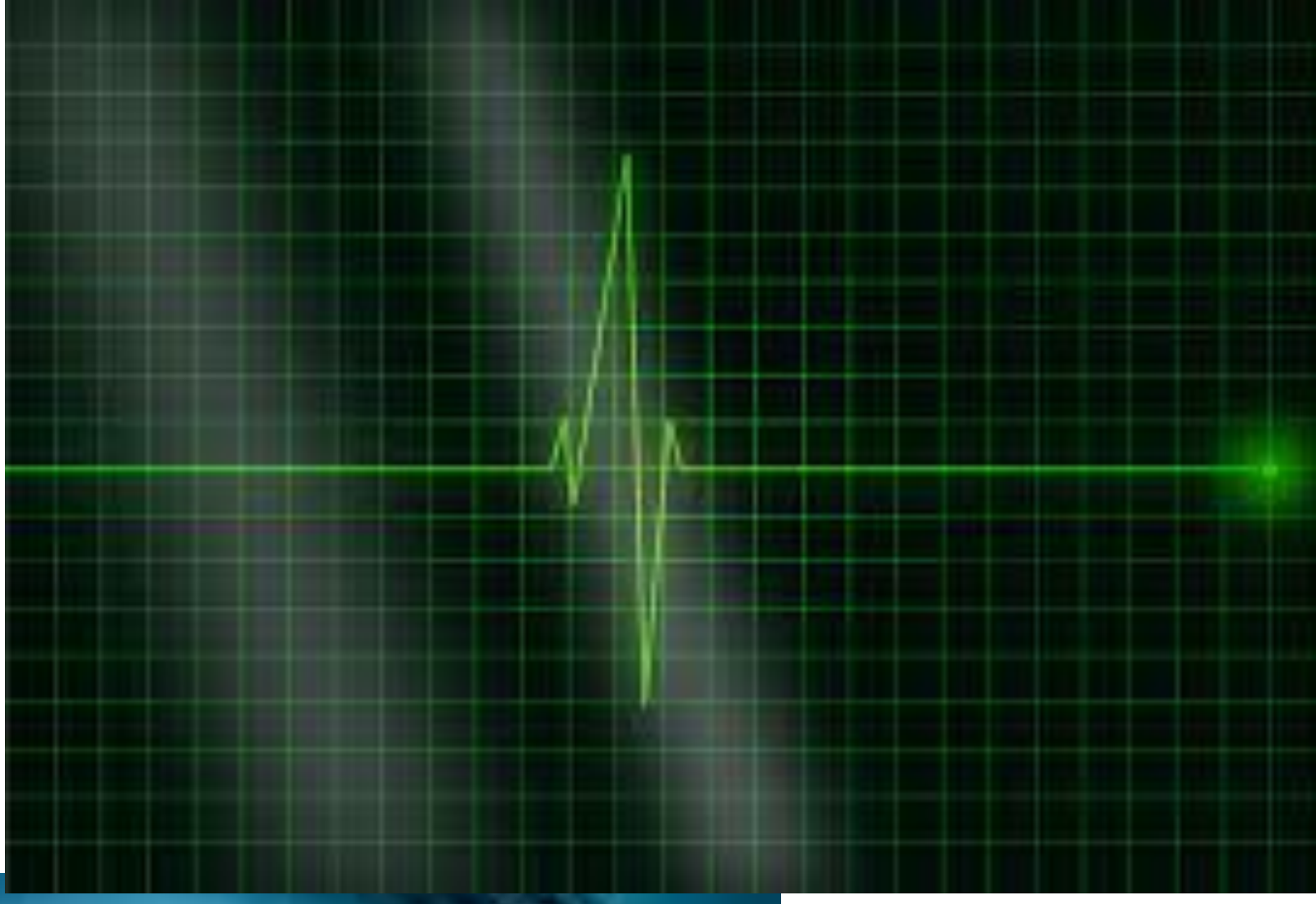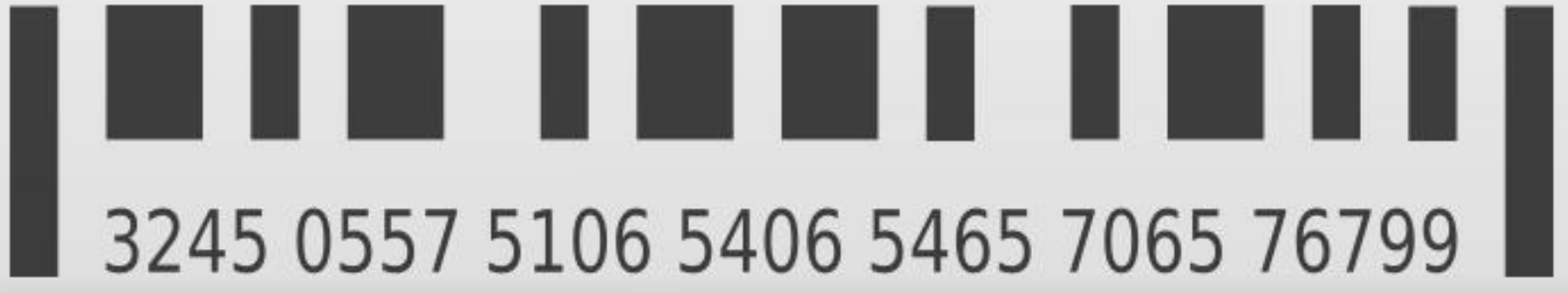
body>data>space — The Hypersensory Self

audio
biofeedback
visual
smell
breath
taste
proximity
tactile
gesture
touch
voice / text
haptic
motion / gait
kinaesthetic
facial / iris
proprioceptic
locational
thought (neural)

memory store

physical self / data self

ON / OFF / SLEEP

Micro-Chip Implant

Breathe

3245 0557 5106 5406 5465 7065 76799

Telepresence

….our skin became our INTERACTION CANVAS, as we connected two, three distant stages for dance performances, exchanging body knowledge, sharing creative ideas and exploring solutions….

CellBytes / skintouchfeel performances, creating remote stage telepresence connections between festivals, clubs + arts venues in the UK / international 1996-2007

Digital Intimacy through telepresence
CellBytes / skintouchfeel - 1996 onwards - layering skin on skin through connected realtime telepresence performances

Digital Intimacy through virtual touch and tele-intuition

skintouchfeel — body>data>space 2002

Digital Intimacy with our avatars

Post Me-New ID

Dare we do it realtime?
Orla Ray, body>data>space 2008

Digital Intimacy through Virtual Mediations

Visions of Our Communal Dreams at
KIBLA Maribor 2012
- Michael Takeo Magruder and team -
visit with your avatar, through
telepresence + via Twitter
(EU Culture Project "Robots and Avatars")

Digital Intimacy through Biofeedback

— personal visualisation + sonification created through your breathe + heartbeat and connected to others

Whisper
by Thecla Schiphorst,
Susan Kozel and
collaborators
— Future Physical Commission
2002-04

Digital Intimacy through Bio-signals

Biocreative Interaction - Marco Donnarumma makes audio visual performances using XTH Sense™
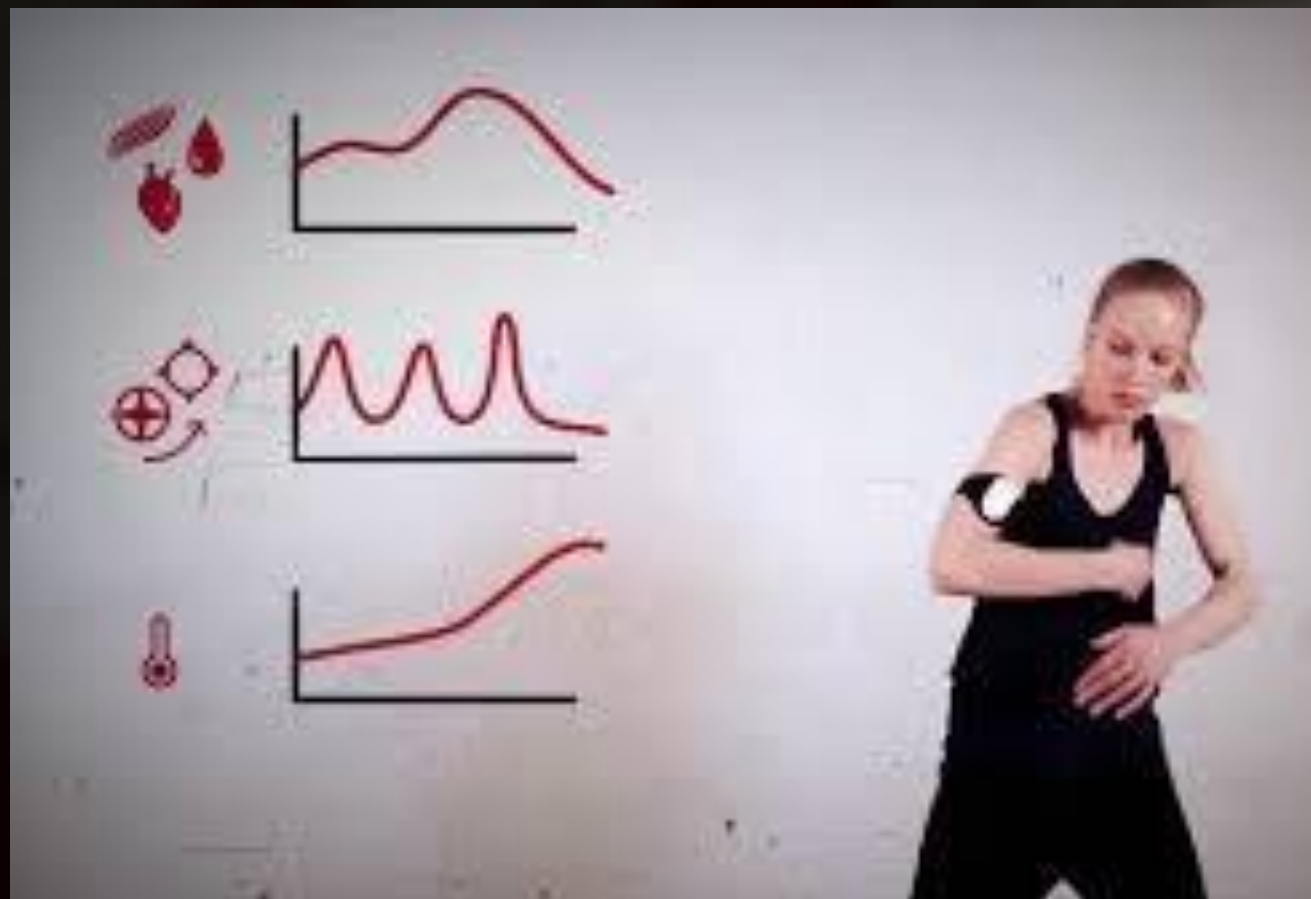
Digital Intimacy
with our robots

Blind Robot - Louis Philippe Demar
body>data>space commission 2009

body>data>space
COLLABORATIVE SHARESPACE

multi-player games

VR / virtual worlds

websites

live streams

Apps

COLLABORATIVE SHARESPACE

AR

social medias

blogs/forums

media facades

interactive installations

**Today we connect, share and collaborate through
screen based, headset and public facade interfaces - using our eyes, ears and hands.
We rarely engage our full body**

Live connected avatars
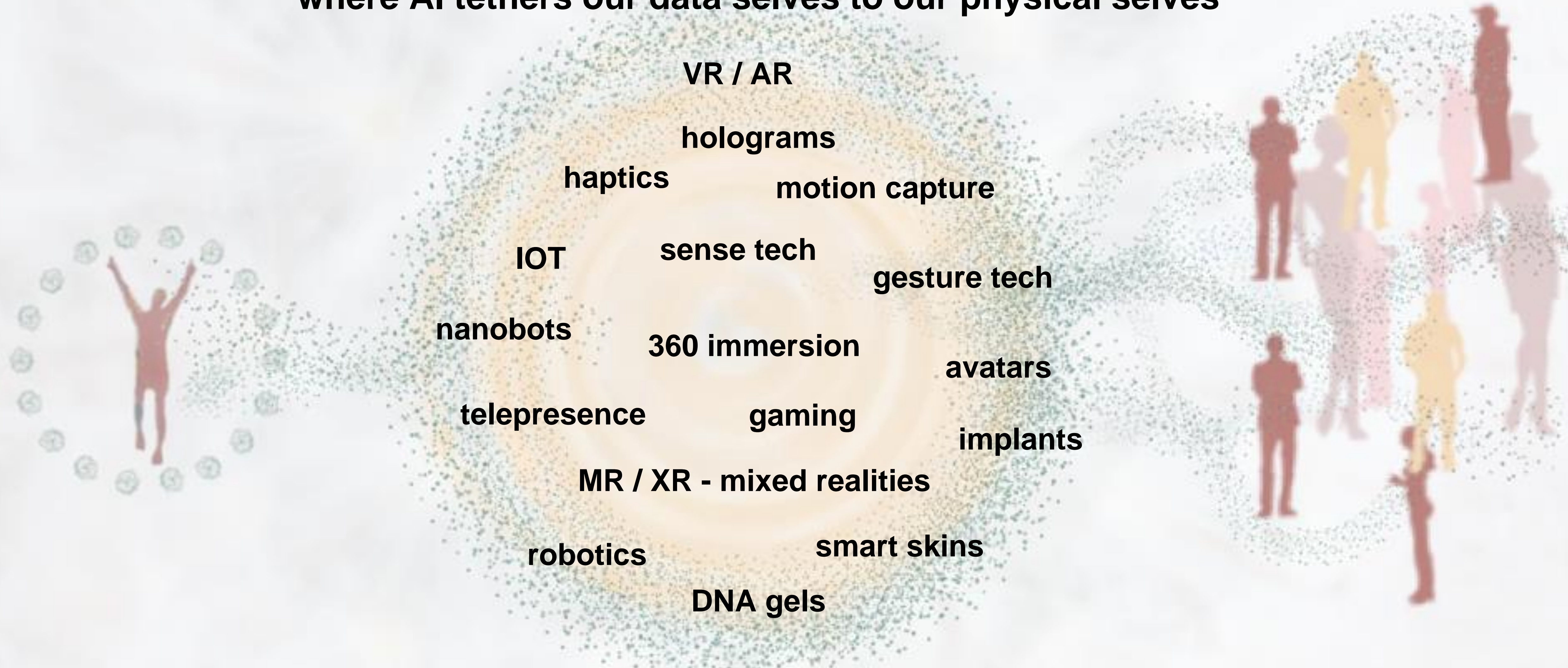
me and my shadow 2012

a connected virtual world for full body immersion

- streamed live between London, Brussels, Istanbul and Paris
- a virtual world, motion capture, telepresence and gestures

body>data>space / cda Paris / Transcultures Brussels / National Theatre London 2012

body>data>space and the Internet of Bodies

- the future co-creation space -
where AI tethers our data selves to our physical selves

VR / AR

holograms

haptics

motion capture

IOT

sense tech

gesture tech

nanobots

360 immersion

avatars

telepresence

gaming

implants

MR / XR - mixed realities

robotics

smart skins

DNA gels

- - alive, connected, collective - no wires, no wearables - this is no space for flaneurs -

Collective Reality - experience togetherness - 2016
Nesta's FutureFest / University of Greenwich / d3 technologies / Genelec - body>data>space

SAT Dome Montreal
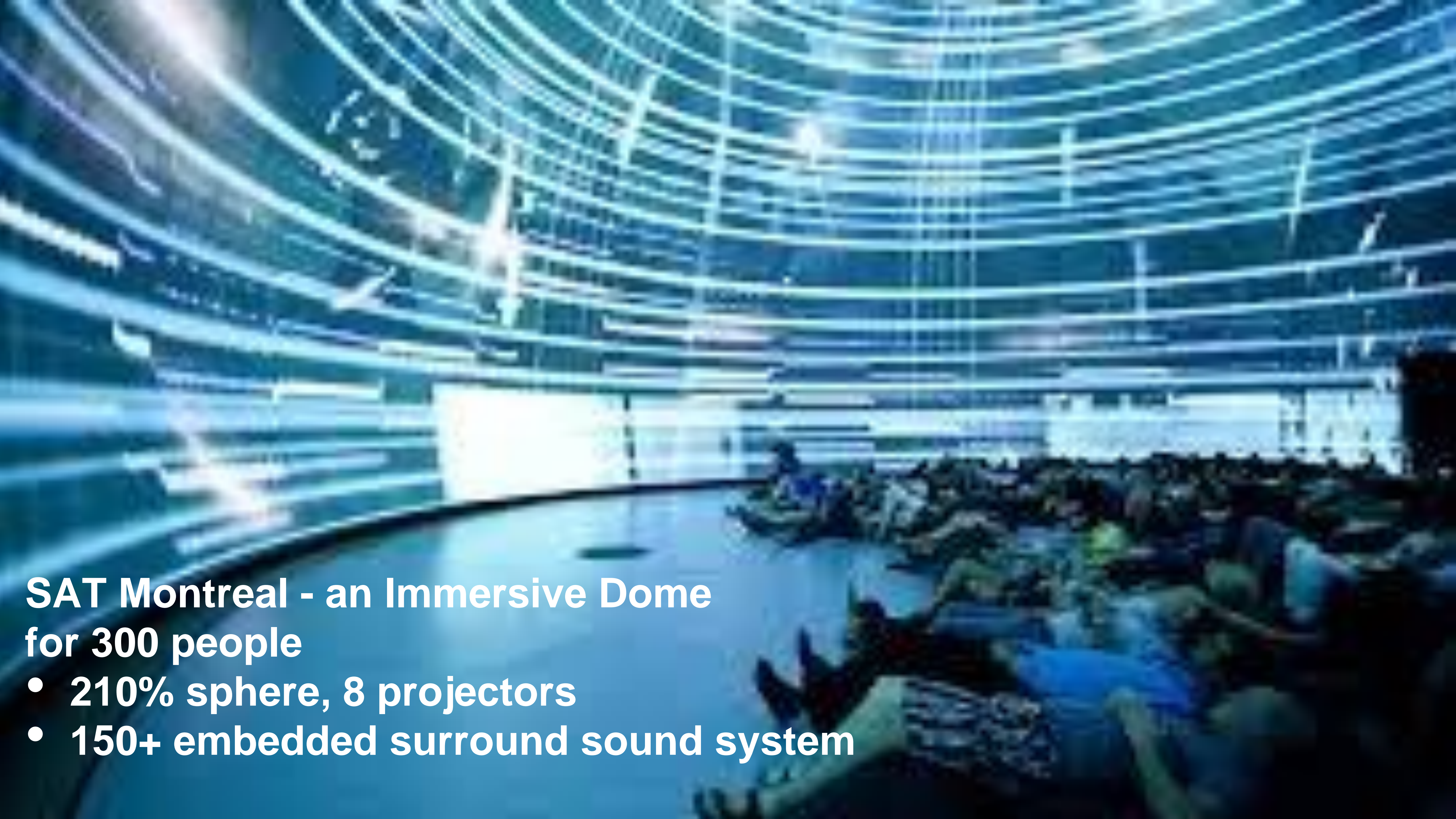
**SAT Montreal - an Immersive Dome
for 300 people**
- 210% sphere, 8 projectors
- 150+ embedded surround sound system

Collective Reality in the SAT Dome 2017
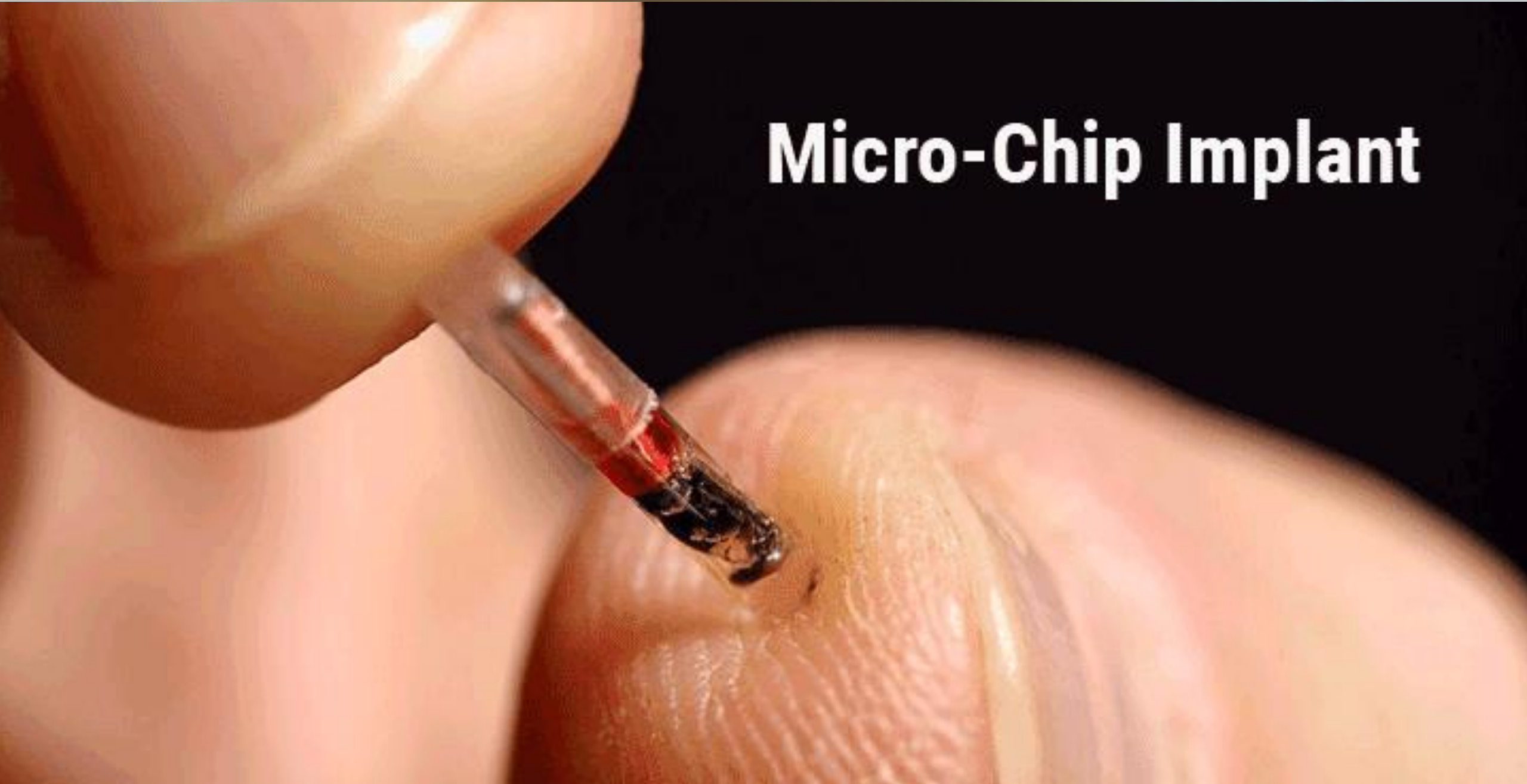
THE INTERNET OF BODIES
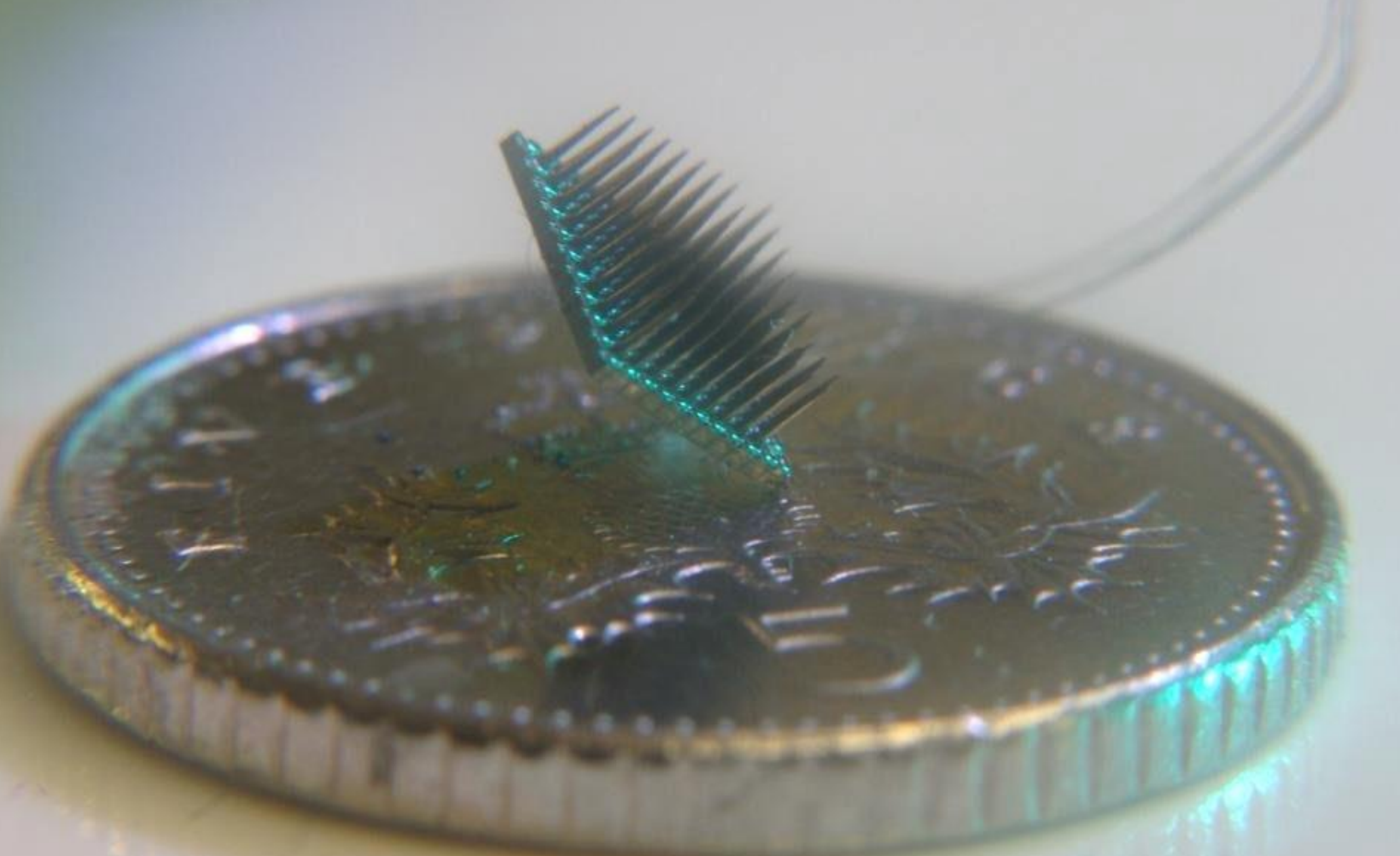
LOVE

INTIMACY

PLEASURE

JOY

COMPASSION

HOPE

EMPATHY

POSITIVE ACTION

Collective embodiment creates positive emotions,
we can all participate, yet we lack the realtime physical spaces,
to cross time and distances and to connect in groups

Implants

Micro-Chip Implant

- internalised
- personalised to your own needs
- transmitting your body data outwards
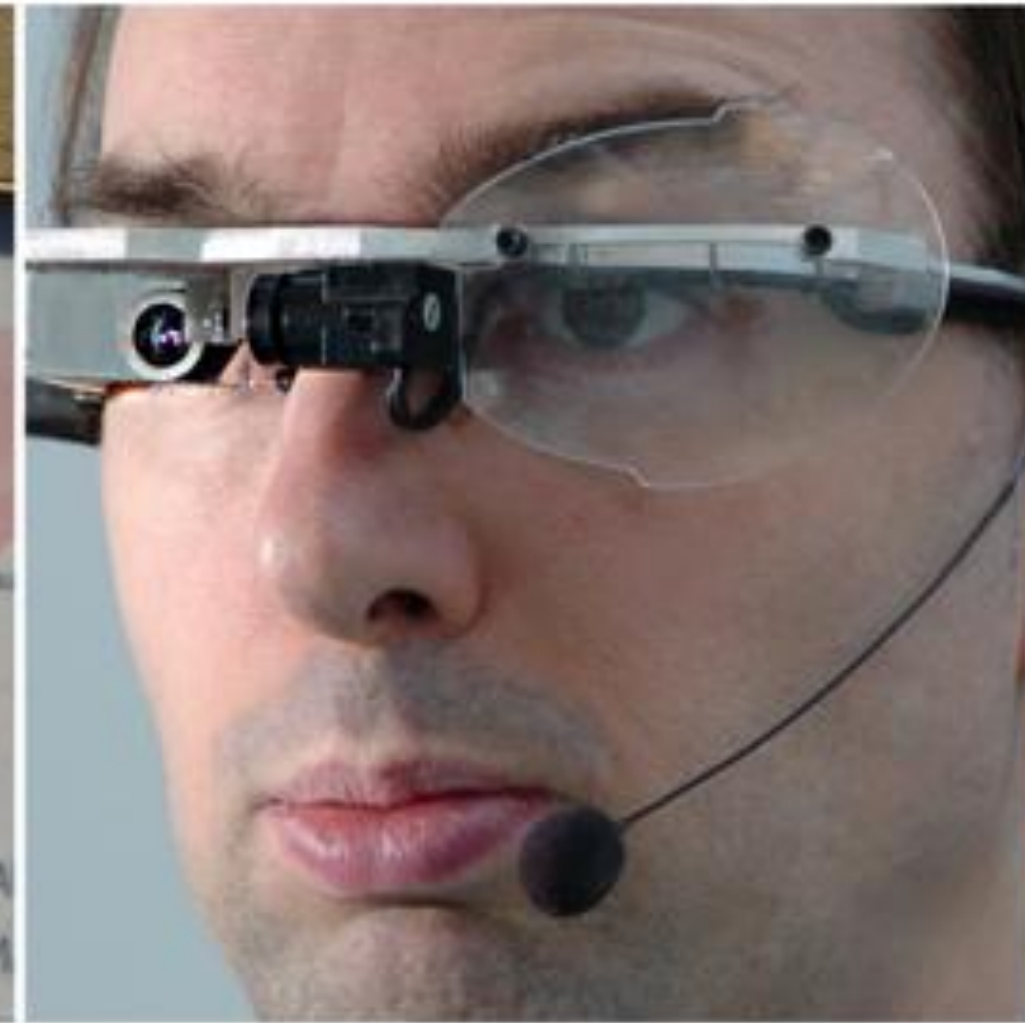- receiving and controlling other data in return

Steve Mann: Evolution of Wearable Computing + Augmediated Reality in everday life
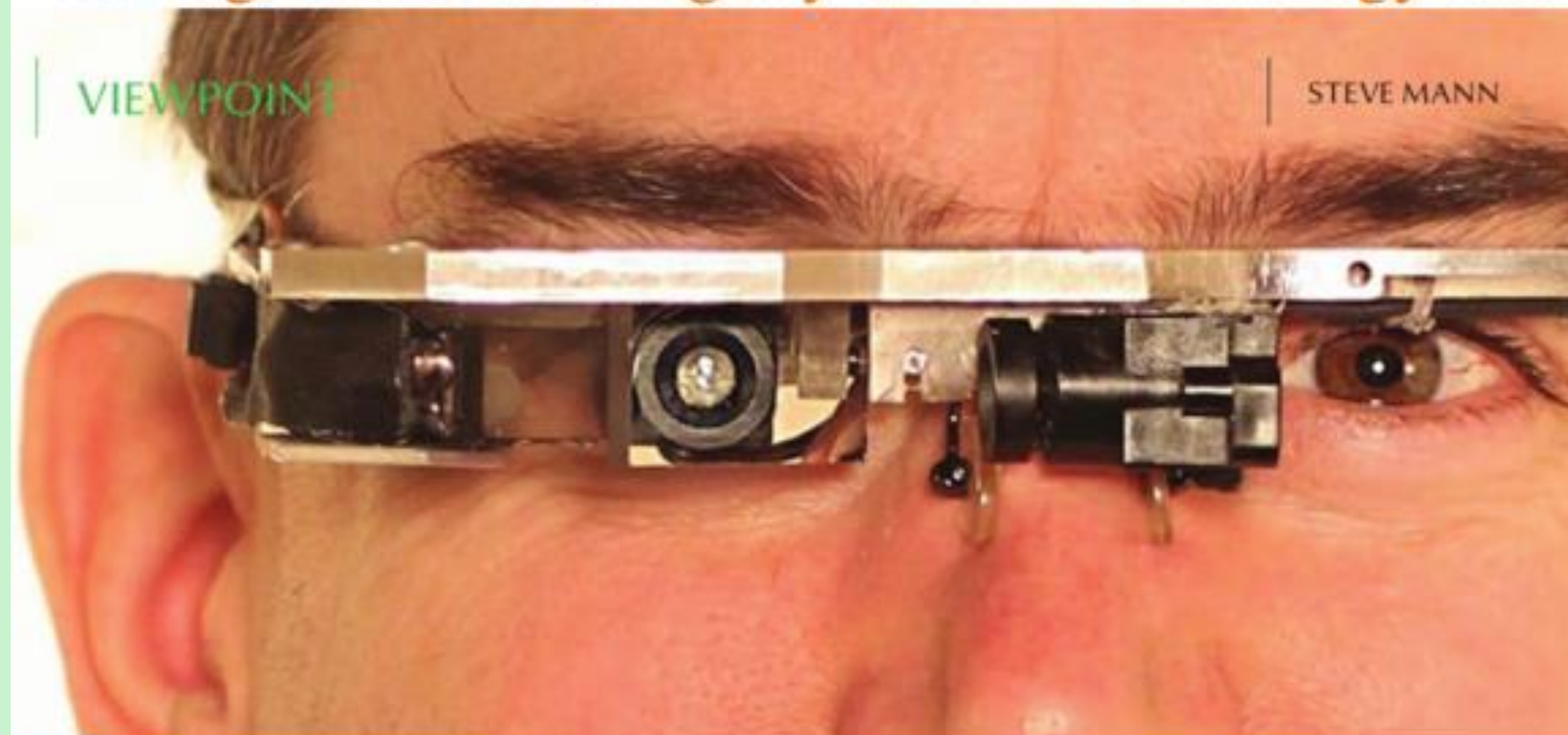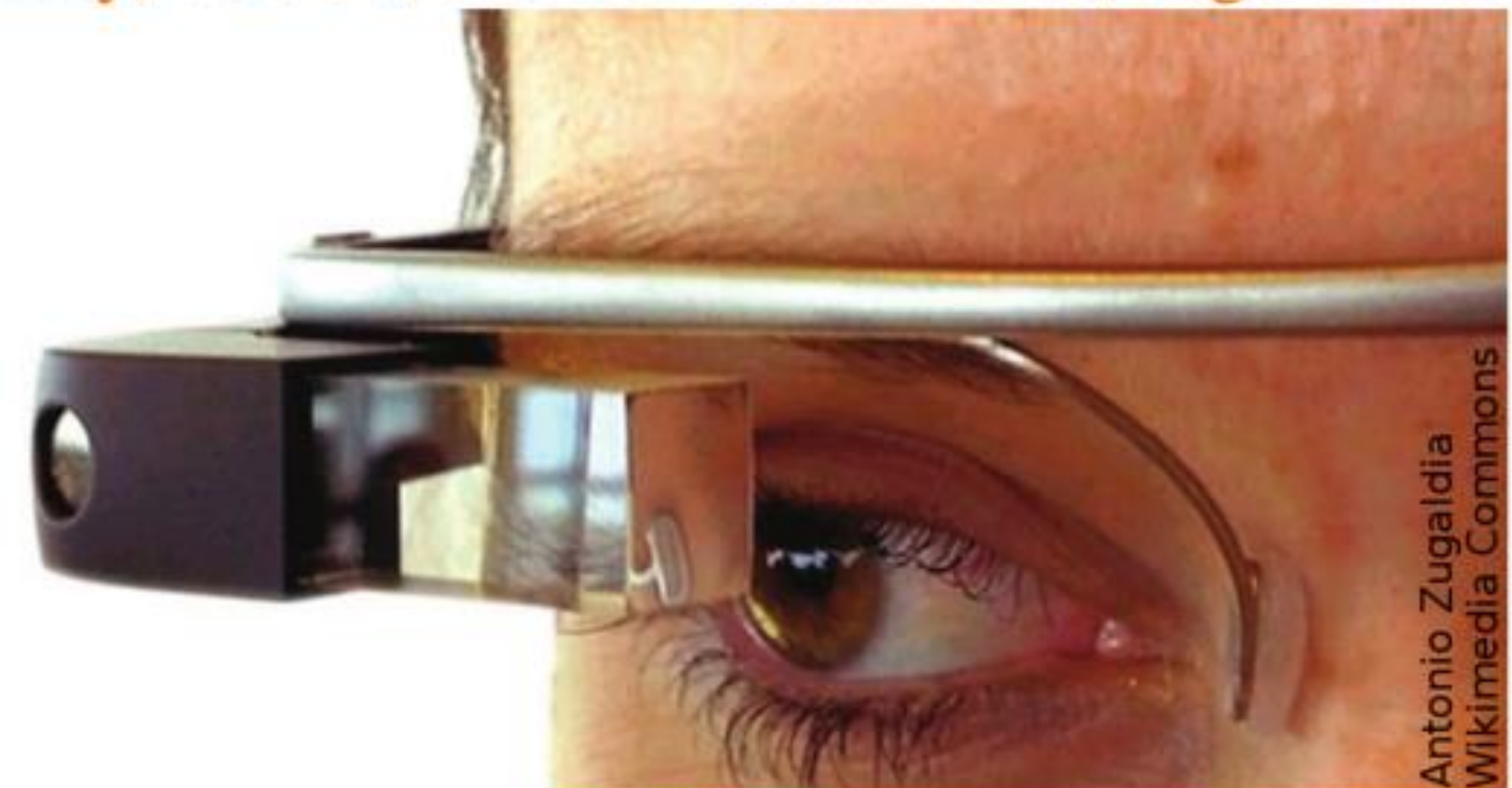
1980 | 1995 passport | 1999 | 2004 with firstborn child

"Through the Glass, Lightly", IEEE Technology and Society, Vol. 31, Number 3, Fall 2012, Pages 10-14

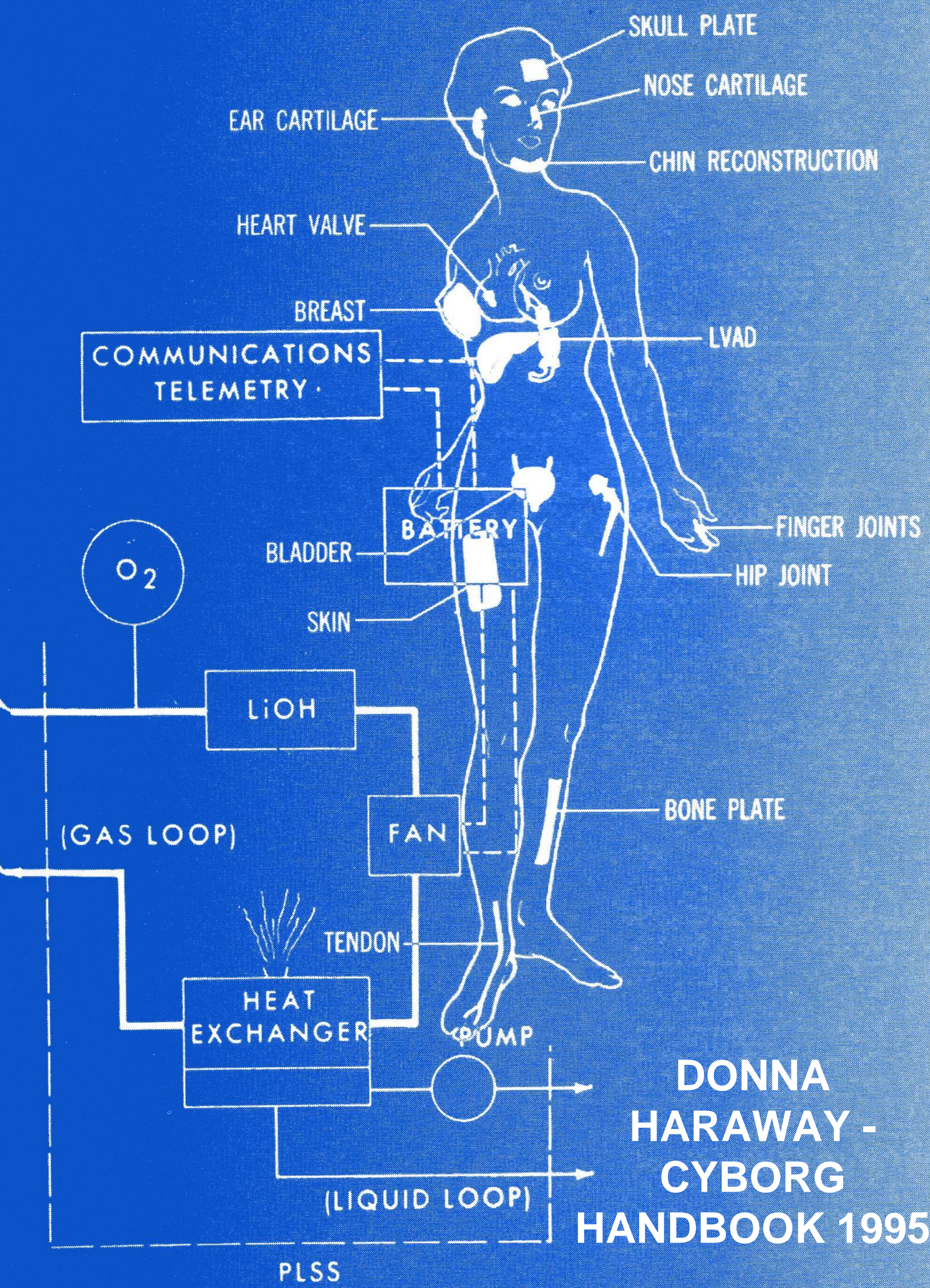VIEWPOINT   STEVE MANN

Mann's 1999 "EyeTap Digital Eye Glass"   2012, "Google Glass"

Mann was recognized as "Father of AR" and the "Father of Wearable Computing" (IEEE ISSCC 2000)

SKULL PLATE
NOSE CARTILAGE
EAR CARTILAGE
CHIN RECONSTRUCTION
HEART VALVE
BREAST
LVAD
COMMUNICATIONS TELEMETRY
O₂
BATTERY
BLADDER
FINGER JOINTS
SKIN
HIP JOINT
LiOH
(GAS LOOP)
FAN
BONE PLATE
TENDON
HEAT EXCHANGER
PUMP
(LIQUID LOOP)
PLSS

DONNA HARAWAY - CYBORG HANDBOOK 1995

STELARC 1995

Manel Muñoz (left) - Catalan cyborg artist with barometric sensors attached to his head, to feel atmospheric pressure changes through vibrations in his ears, predicting weather changes as well as feeling altitude. Part of the Cyborg Foundation, he co-founded the Transpecies Society (2017) with **Neil Harbisson (above),** giving a voice to people who do not identify as being 100% human and to collaborate on a Cyborg Bill of Rights.

Swedish rail company swaps paper tickets for embedded microchips, and around 3000 people are already using this system (Dezeen Sept 2017)

4YFN-Mobile World Congess Barcelona 2019 - Human Chip Implant Onstage

AI

I have my data body, I have my physical body. I want my data body tethered to my physical body and I want AI to aid me with that bridge, to enable me to have the conversation with myself - between those two (or more) "selves" that I have.

To support and enable me to deal with this complex weave of digital processes, to give me the best outcomes. My data body, being portable across time and space, being transformable into my avatars, into my robots, will represent me outwardly.

Ghislaine Boddington
#givememybodydataspace

How can we all ensure the ETHICAL USE OF our personal body data ?

Who owns it? Rights to use? Who controls the usage?

How can we enable a win-win situation for all involved?

Should we all have our own personal data dashboard?

As Artificial intelligence merges with human intelligence,
how do we create a sound moral and social framework for collaboration?

**Please remember - we are ALL participants - this effects us
and all our families, children and grandchildren onwards**

body>data>space
PERSONAL DATA DASHBOARD
- we control the settings (with our AI) -

ANONYMOUS

SHARED FOR SOCIAL GOOD
into large data sets to aid global
improvements - medical, climate, education
++++

****

BUSINESS USE
for financial return

WORK USE
for collaboration
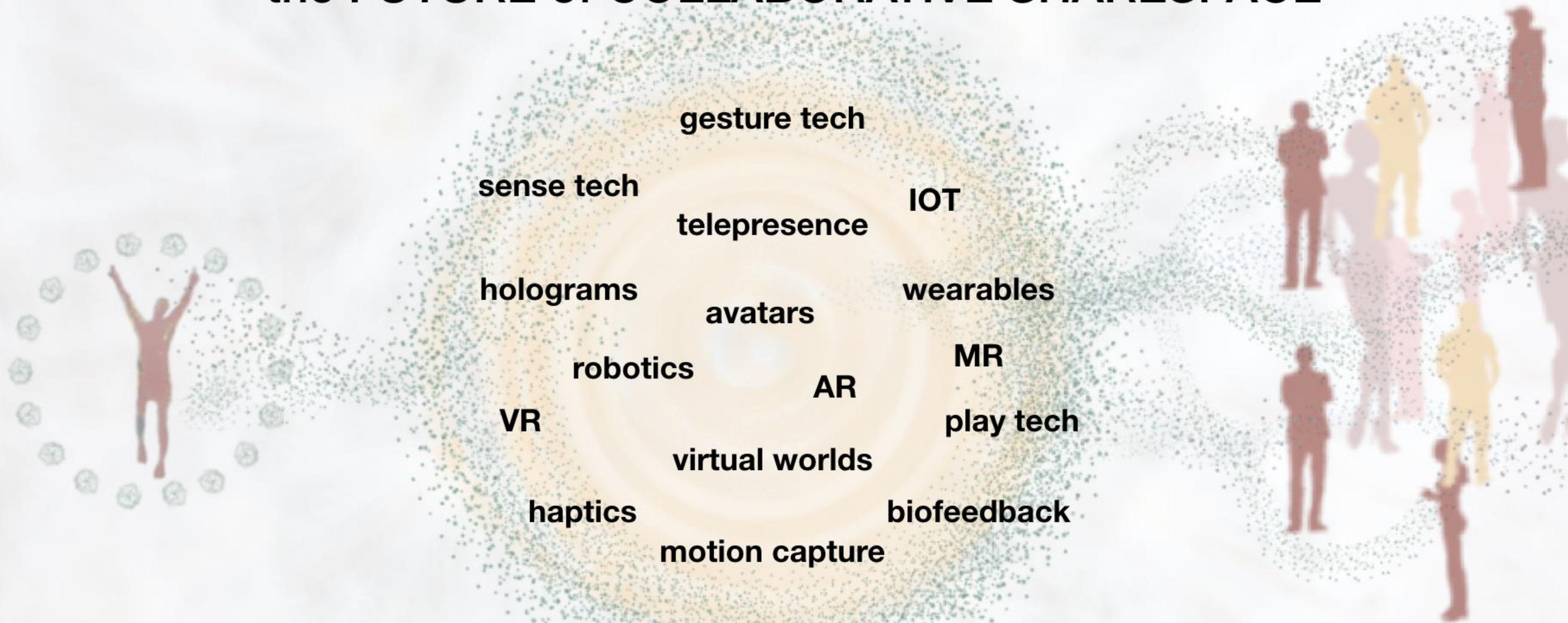
SOCIAL USE
for family, friends
and social groupings

IN MY NAME

#givememybodydataspace

body>data>space
the FUTURE of COLLABORATIVE SHARESPACE

gesture tech

sense tech

IOT

telepresence

holograms

wearables

avatars

robotics

MR

AR

VR

play tech

virtual worlds

haptics

biofeedback

motion capture

Using the full body we can create an immersion portal — networked to connect to other venues anywhere in world — sharing content and actions between teams and communities across time and space.
(3000 such immersion domes are being built in China over the next 5 years)

body>data>space

LETS AIM FOR
**virtual physical blended experiences for
positive human sensory enhancement.**

**Lets <u>prioritise the development of personalised digital intimacy,</u>
enabling COLLECTIVE EMBODIMENT to work
alongside collective intelligence.**

**This is our inherent responsibility as living emotional beings
and this I call the
<u>Internet of Bodies.</u>**
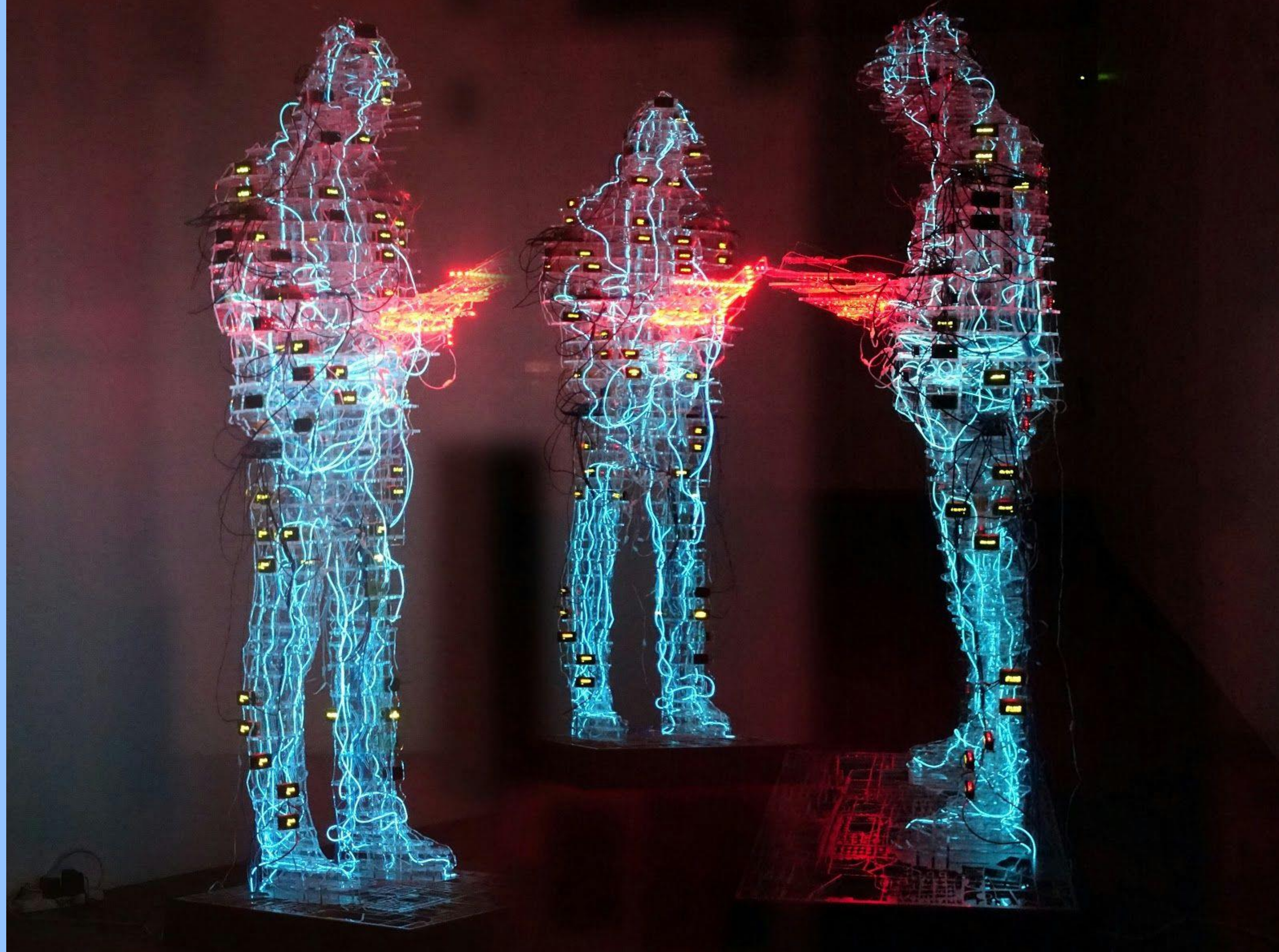
STANZA - THE READER - Nesta UK - FutureFest 2018

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