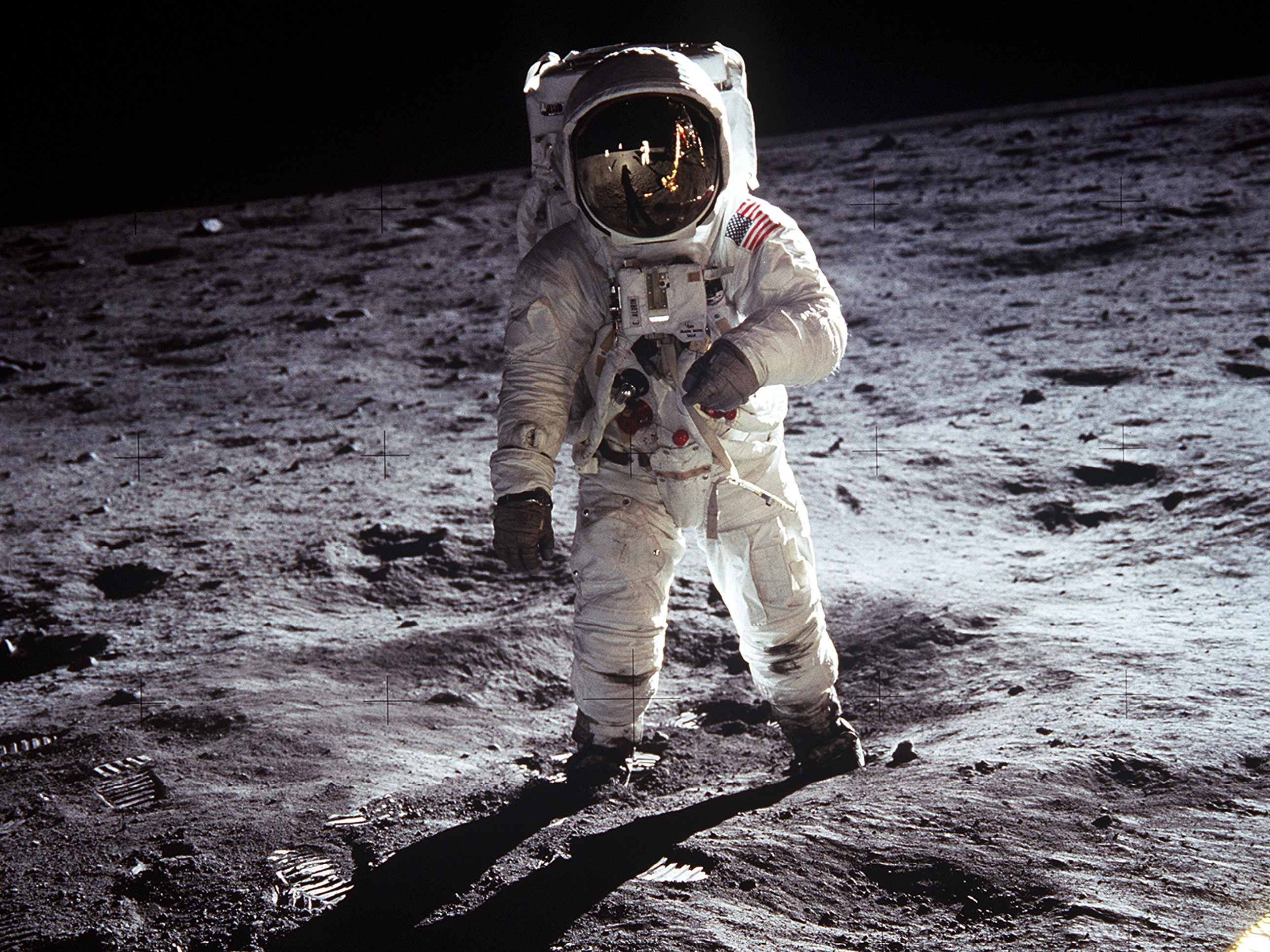
2008ha

Bureaucrats sometimes do not have the correct information, while citizens and users of resources do it

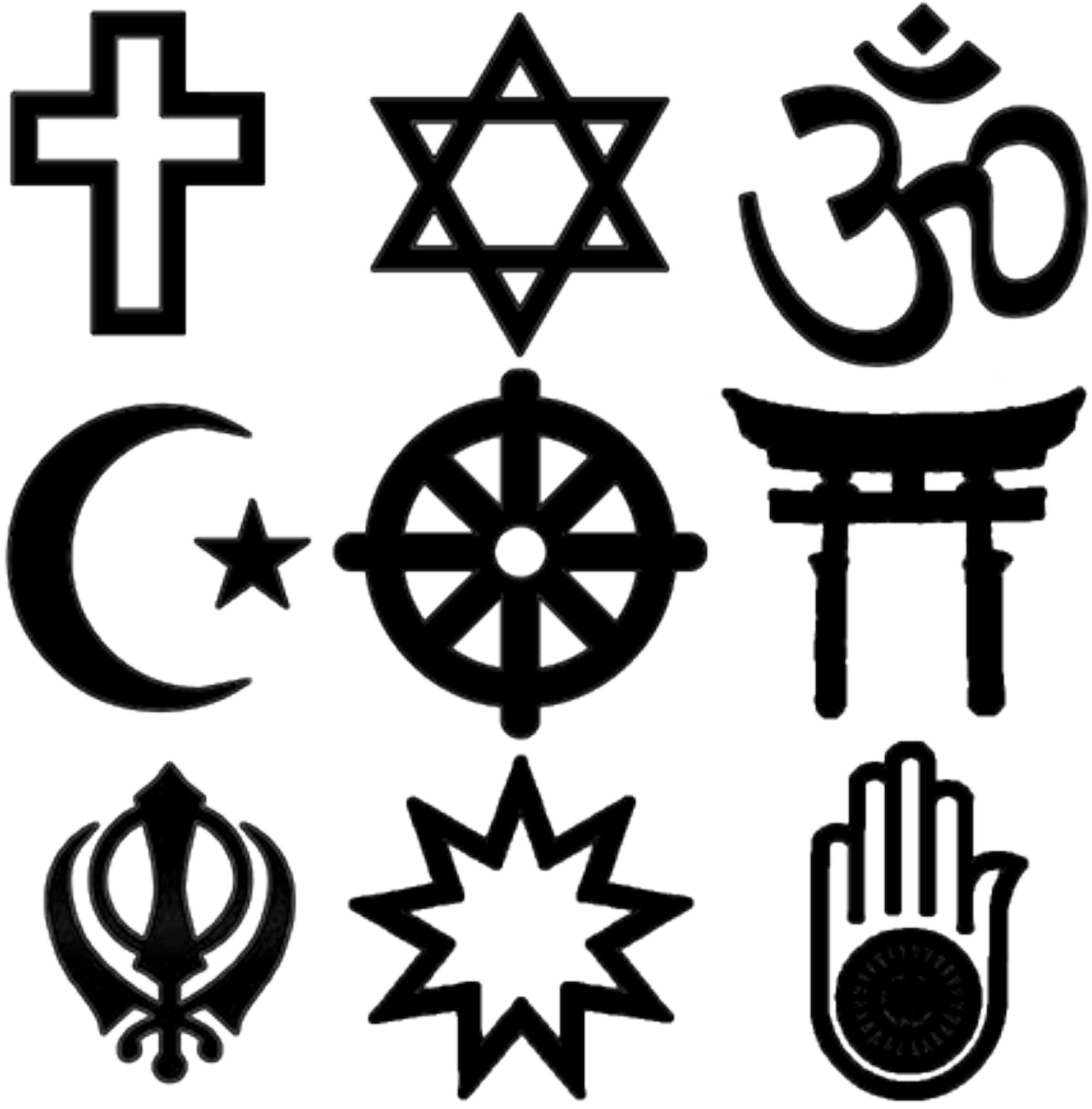
- Elinor Ostrom

2009 Nobel Prize in Economics



Global Financial Crisis
Economic Turbulence
Earnings Fall
Job Cuts
Deficits
Profit Falls
Bailout
Jobless
Economy
Market Declines

2878
NEW YO
CANADA
LAND OF THE
HOMELESS

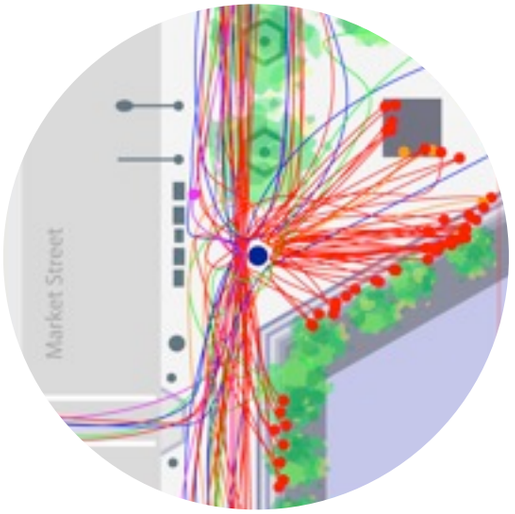


Chronicle / Penni Gladstone

from proprietary innovation ...

to populist innovation

NOKIA


Market Street

i hate
PORTLAND

042

FEELS LIKE...?

Living Environments Lab

a collaborative research laboratory
focusing on the critical intersection of
human life, out living planet, and technology

human life

HCI
interface design
usability
experience
empowerment
emotion
persuasion
...

environmental life

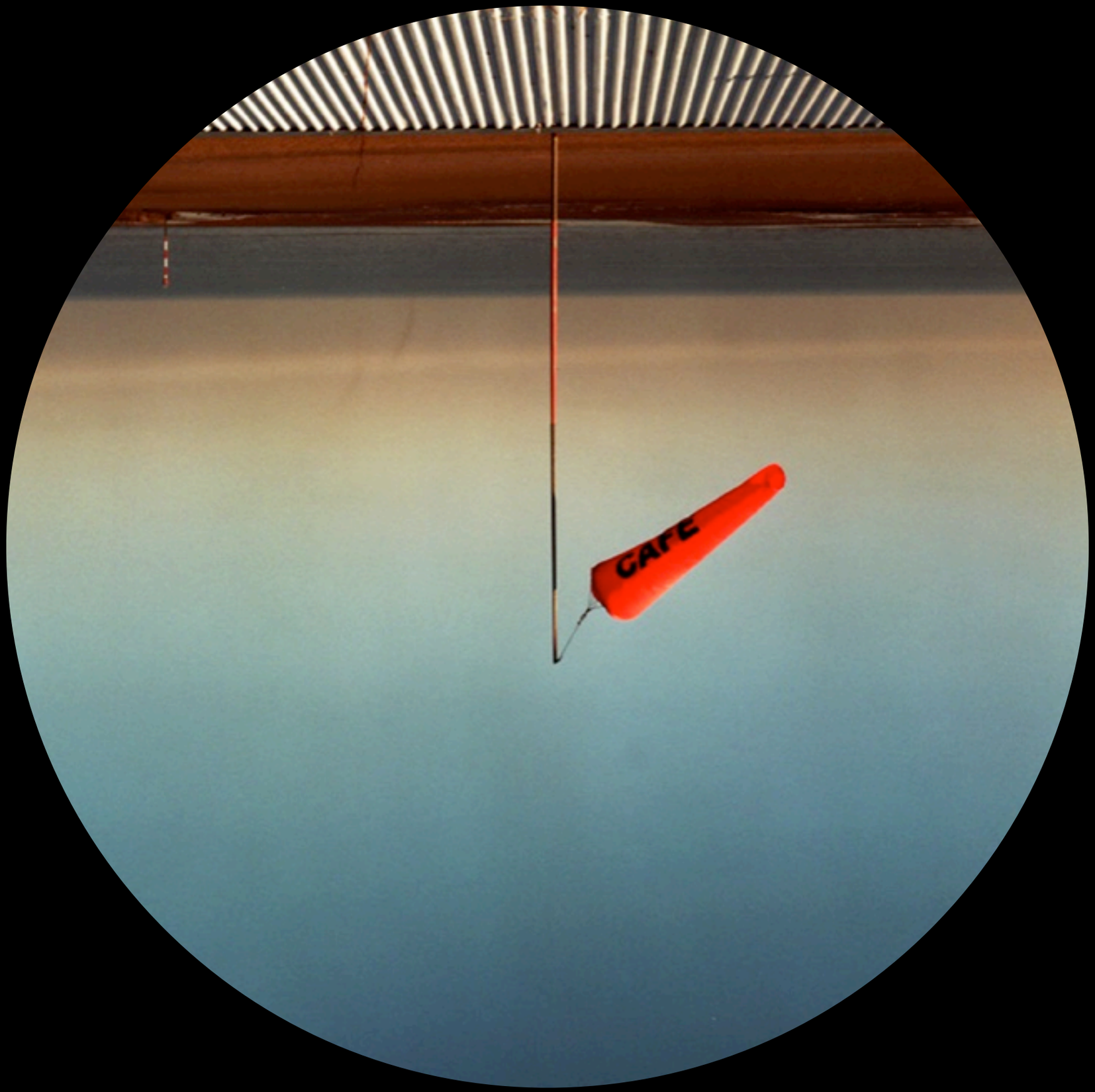
sustainability
environmental awareness
human health and well being
alternative energies
peer-to-peer power
new materials
methods for making & re-making
...

If you cannot measure it

you cannot improve it

- Lord Kelvin

SOUTHPOLE KM 15130
KM 1734
BANGKOK
KAPSTAD
KM 9230
KM 2049
REYKJAVIK
KM 2671
KÄSTLE
LONDON
KM 471
WIEN
BUZZARD
GALLNEUKIRCHEN
424 Km
6
5


CAFE

4.95
18.95
34.90
19.90
6.95

AT&T
3G
SMS

Tell me, I forget.

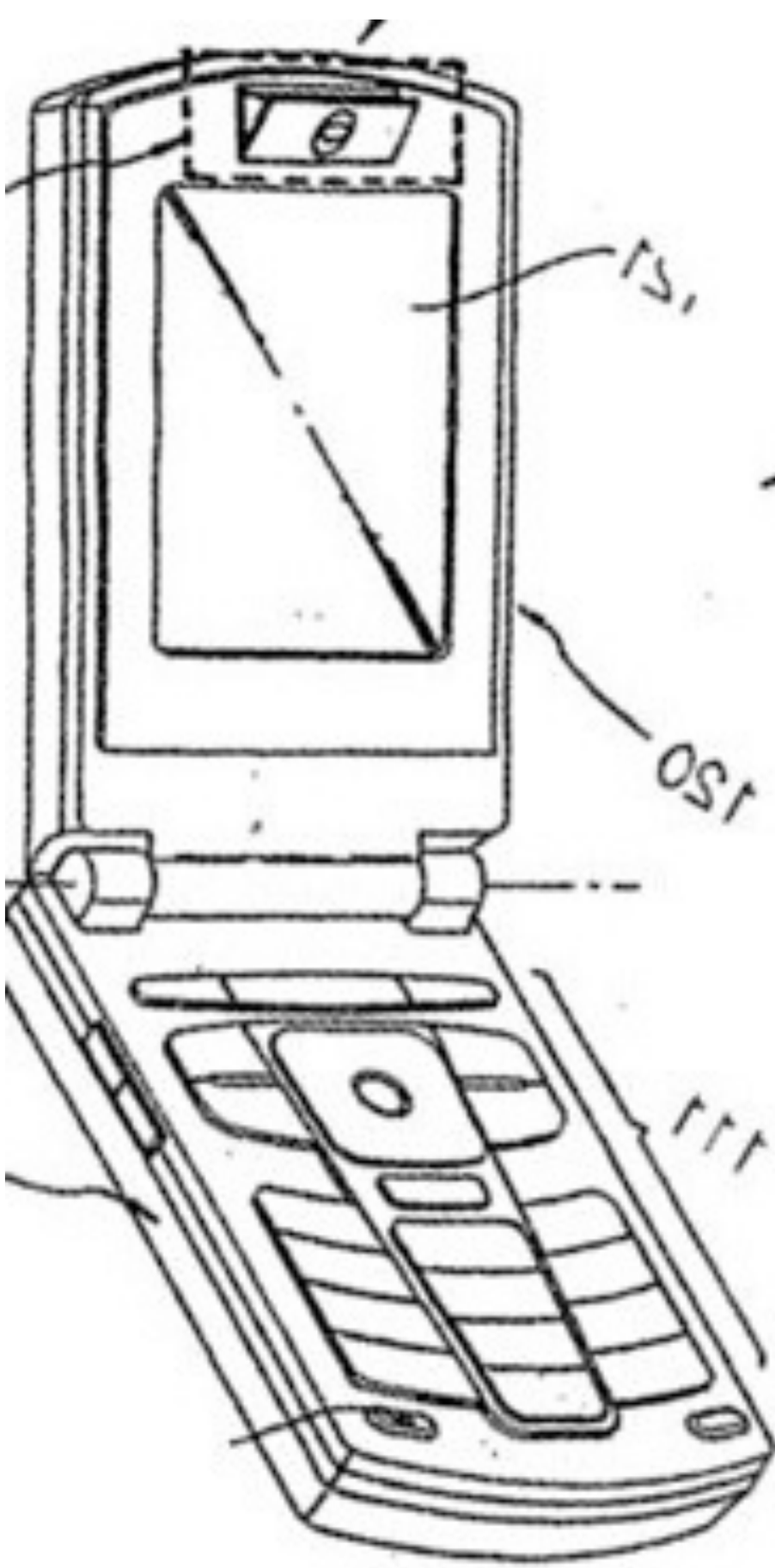
Show me, I remember.

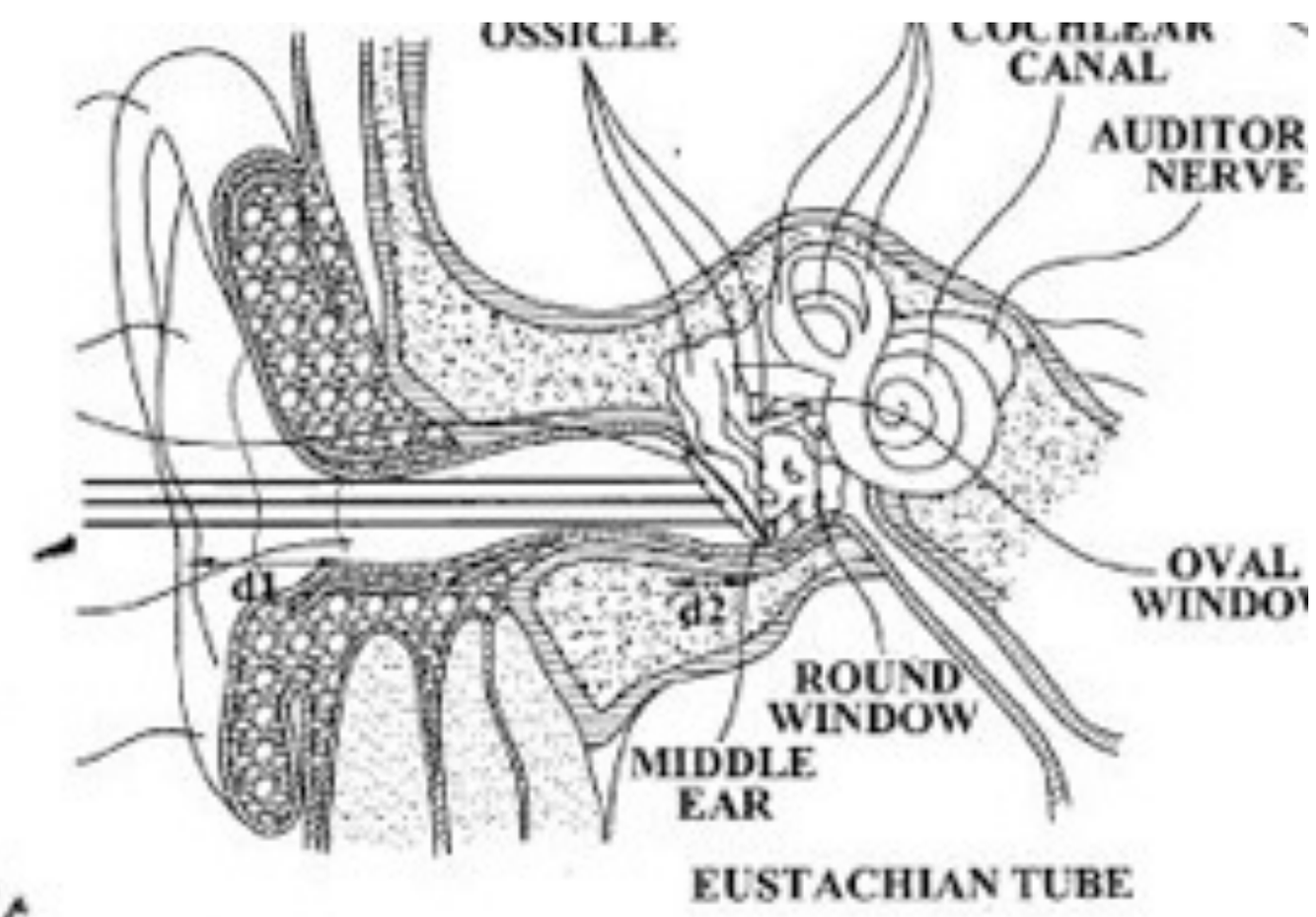
Involve me, I understand.

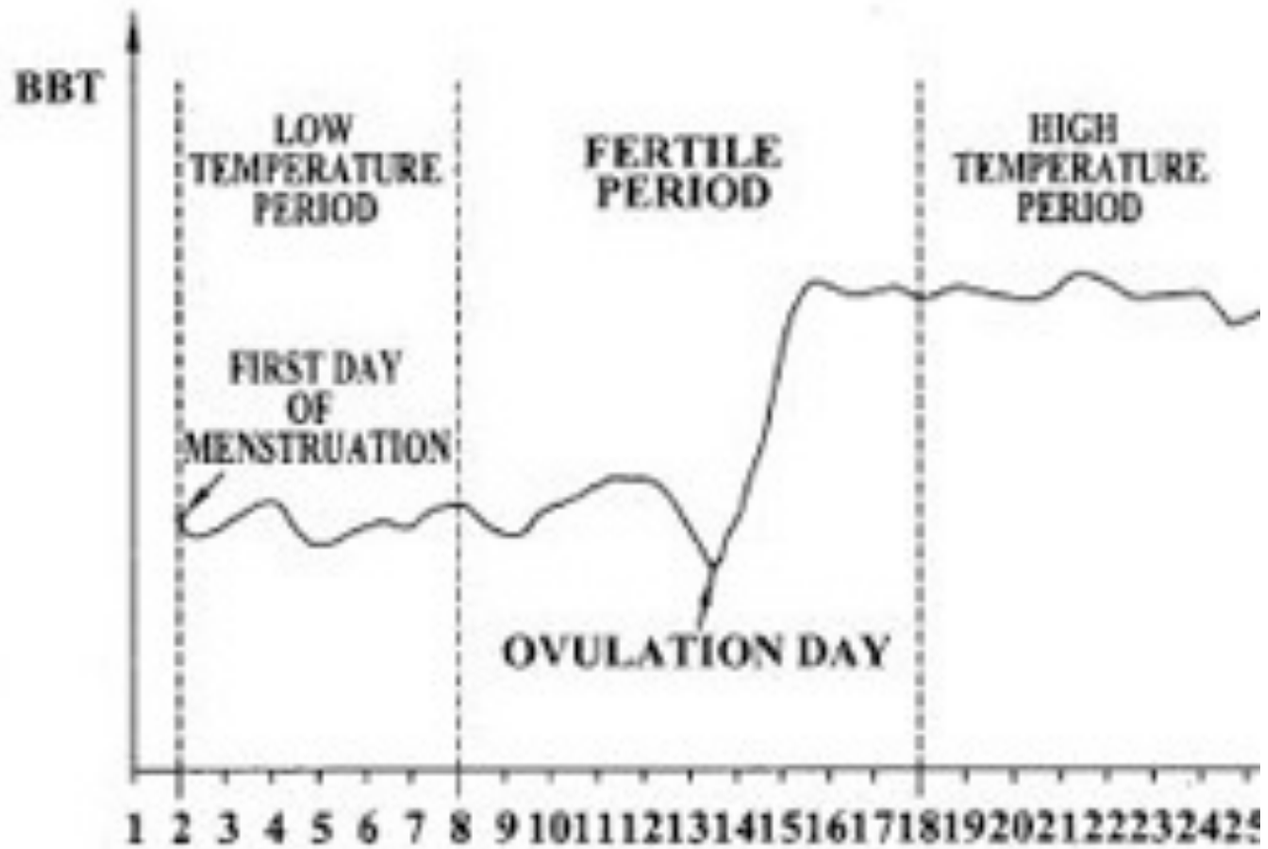
- Chinese proverb

Sensor Rich Mobile Devices

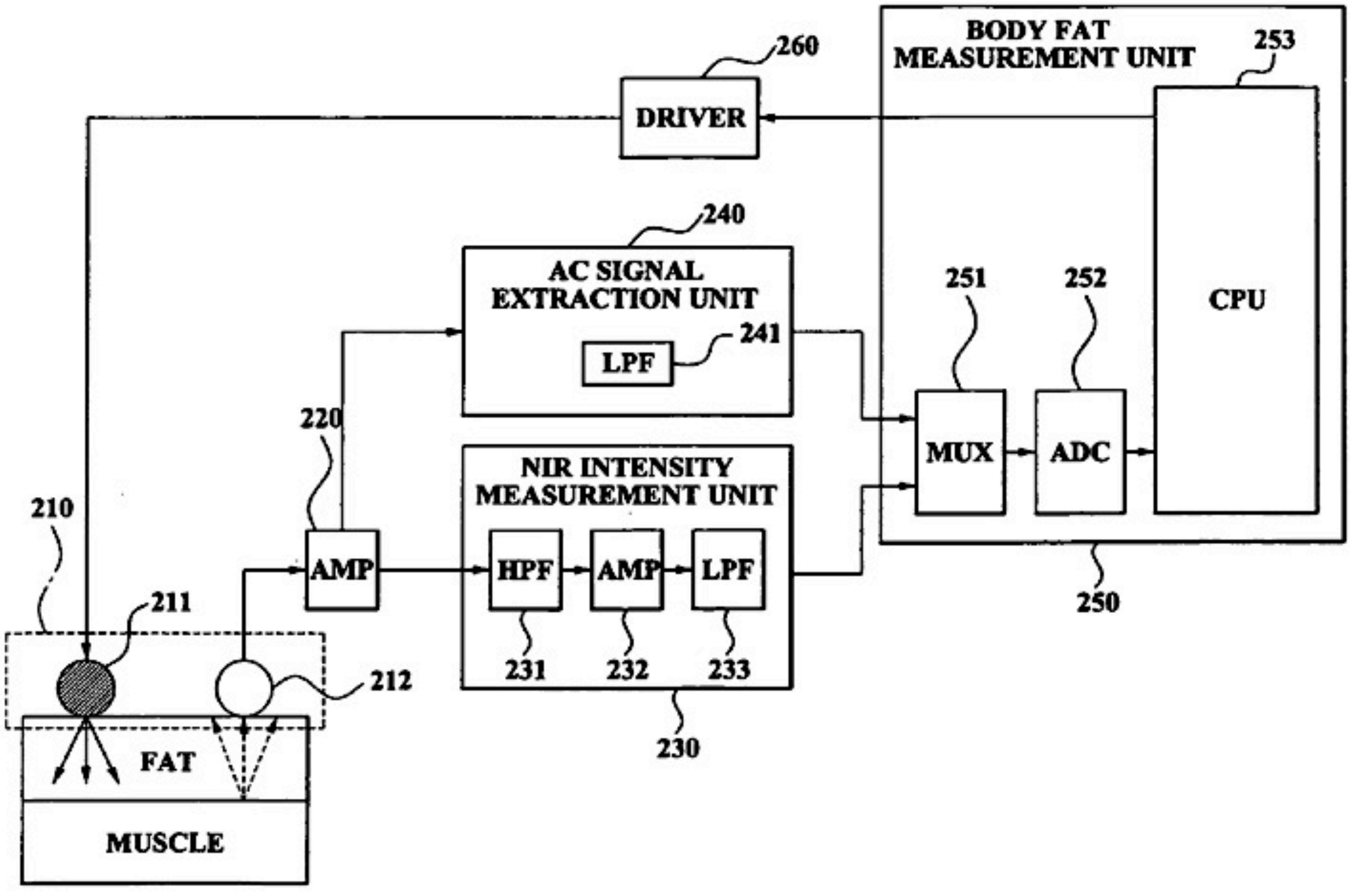
Citizen Driven Content Creation


151
150
111

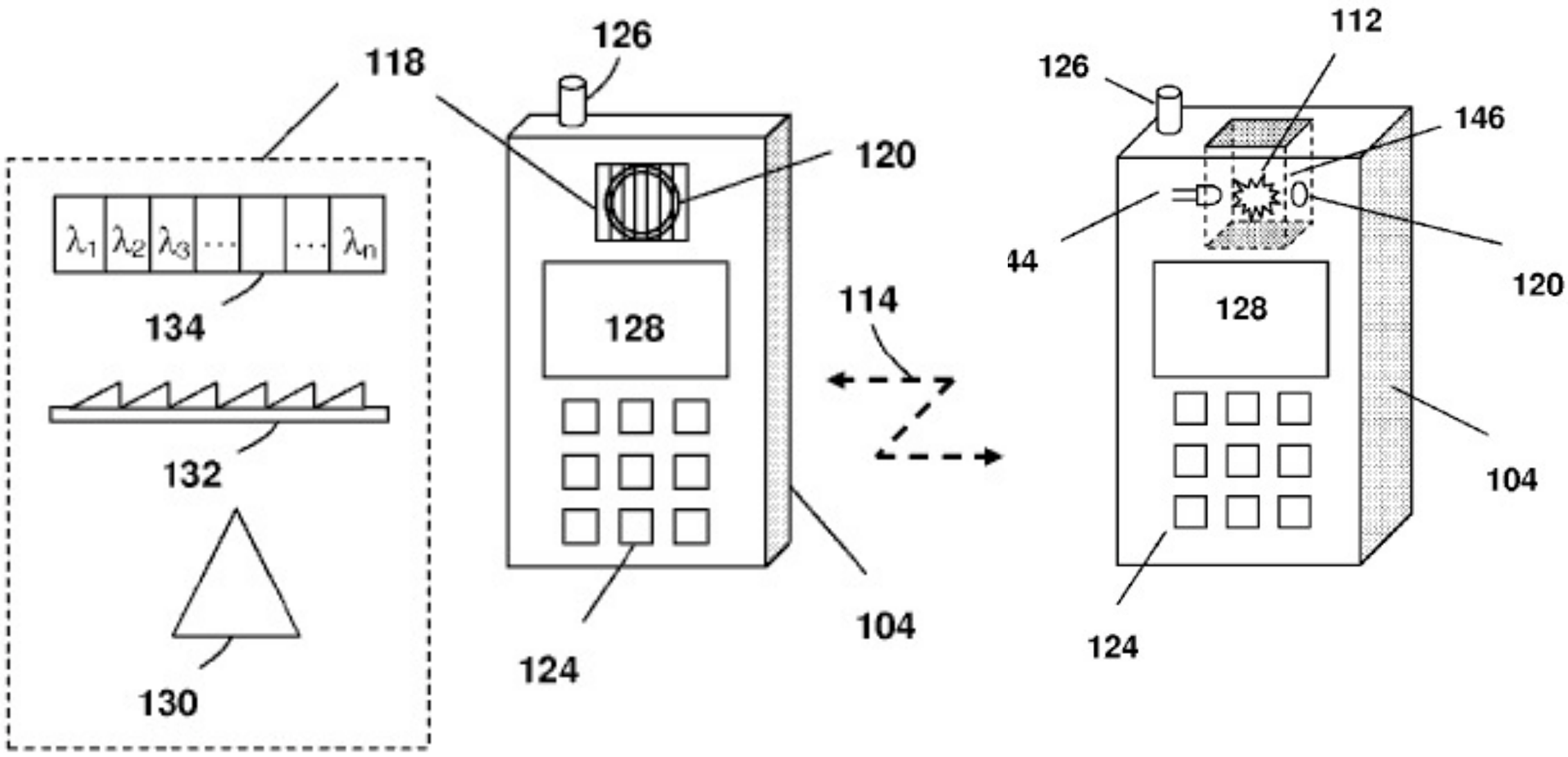

OSSICLE
COCHLEAR CANAL
AUDITOR NERVE
OVAL WINDOW
d1
d2
ROUND WINDOW
MIDDLE EAR
EUSTACHIAN TUBE


BBT
LOW TEMPERATURE PERIOD
FERTILE PERIOD
HIGH TEMPERATURE PERIOD
FIRST DAY OF MENSTRUATION
OVULATION DAY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

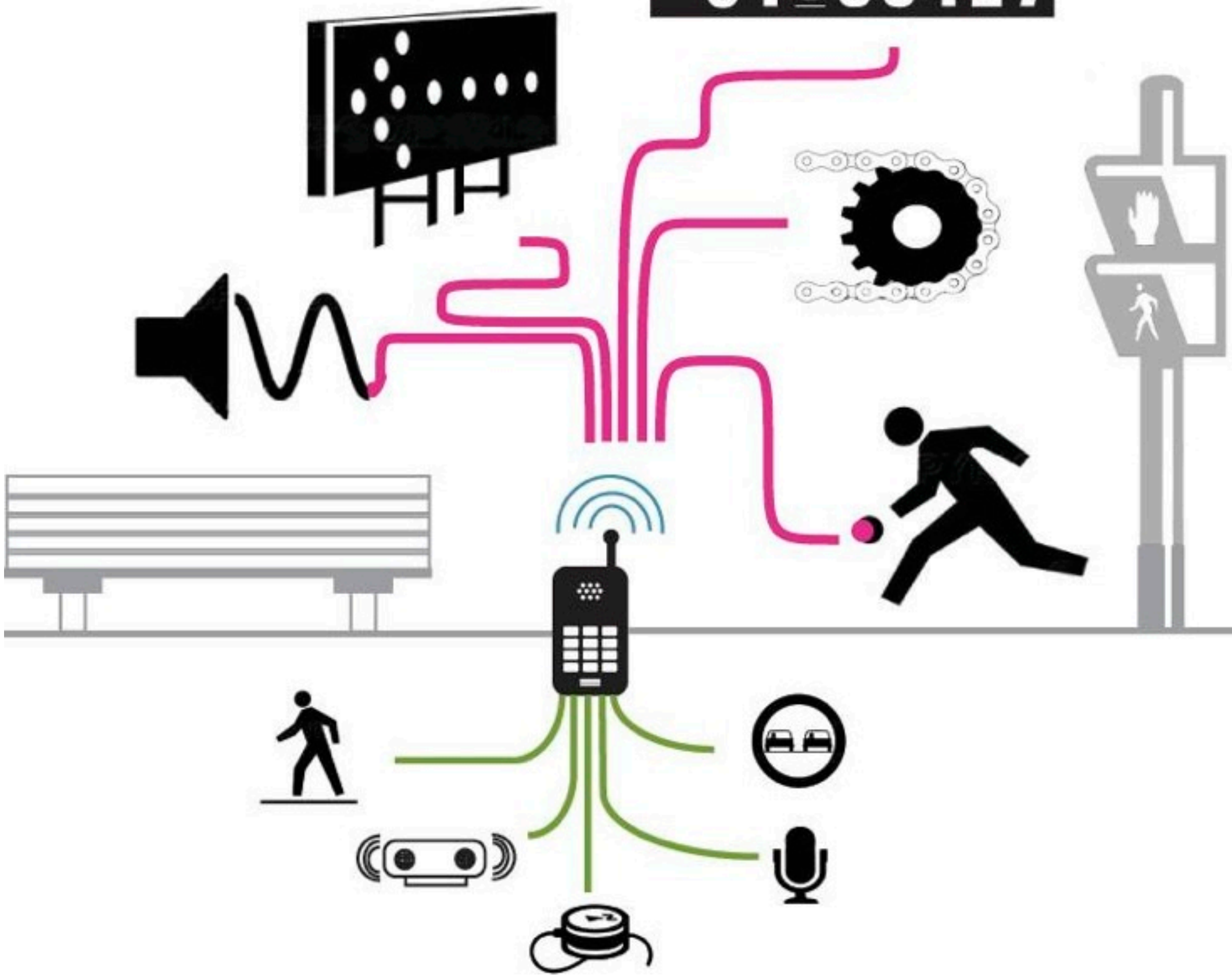
Apparatus, method, and medium for measuring body fat using a near infrared signal



Spectroscopic Sensor on Mobile Phone



03983427



SensorPlanet
Nokia

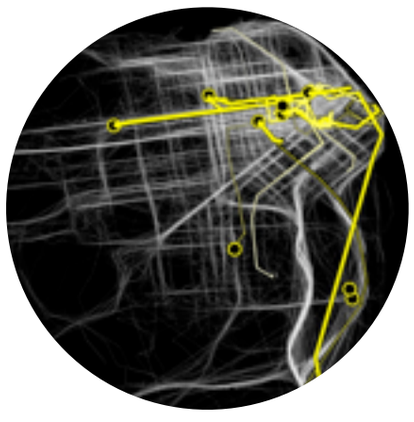
CitySense
MIT

CENS
UCLA

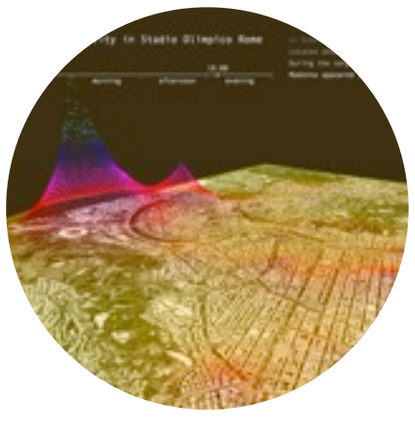
Pachube
Usman Haque

SenseWeb
MSR

Feral Robots
Natalie Jeremijenko



Cabspotting
Stamen Design



Real Time Rome
Senseable Cities MIT

Citizen Science

1. Engage people in doing Street Science that results in practical action

2. Motivate people to gather, analyze, share, and act upon information

3. Develop a device that is usable by lay people and produces **credible** information that can be understood by non-experts

4. Develop community software infrastructure to support communication and action

Citizen Science

Improve the science literacy of everyday citizens through active participation in basic scientific data collection and use of scientific principles

Citizen Science

Provide professional scientists and stakeholders with access to richer, finer grain data sets for modeling, analyzing, and advancing both fundamental and applied knowledge regarding people and the ecosystem

Citizen Science

Develop new usage models and user experiences for the mobile phone as a tool for promoting transparency and enabling grassroots participation in local community and civic government policy making

Citizen Science

Create greater public awareness and understanding of the relationships between humans and the natural environment particularly with regard to sustainability and environmental issues

Collect

Express

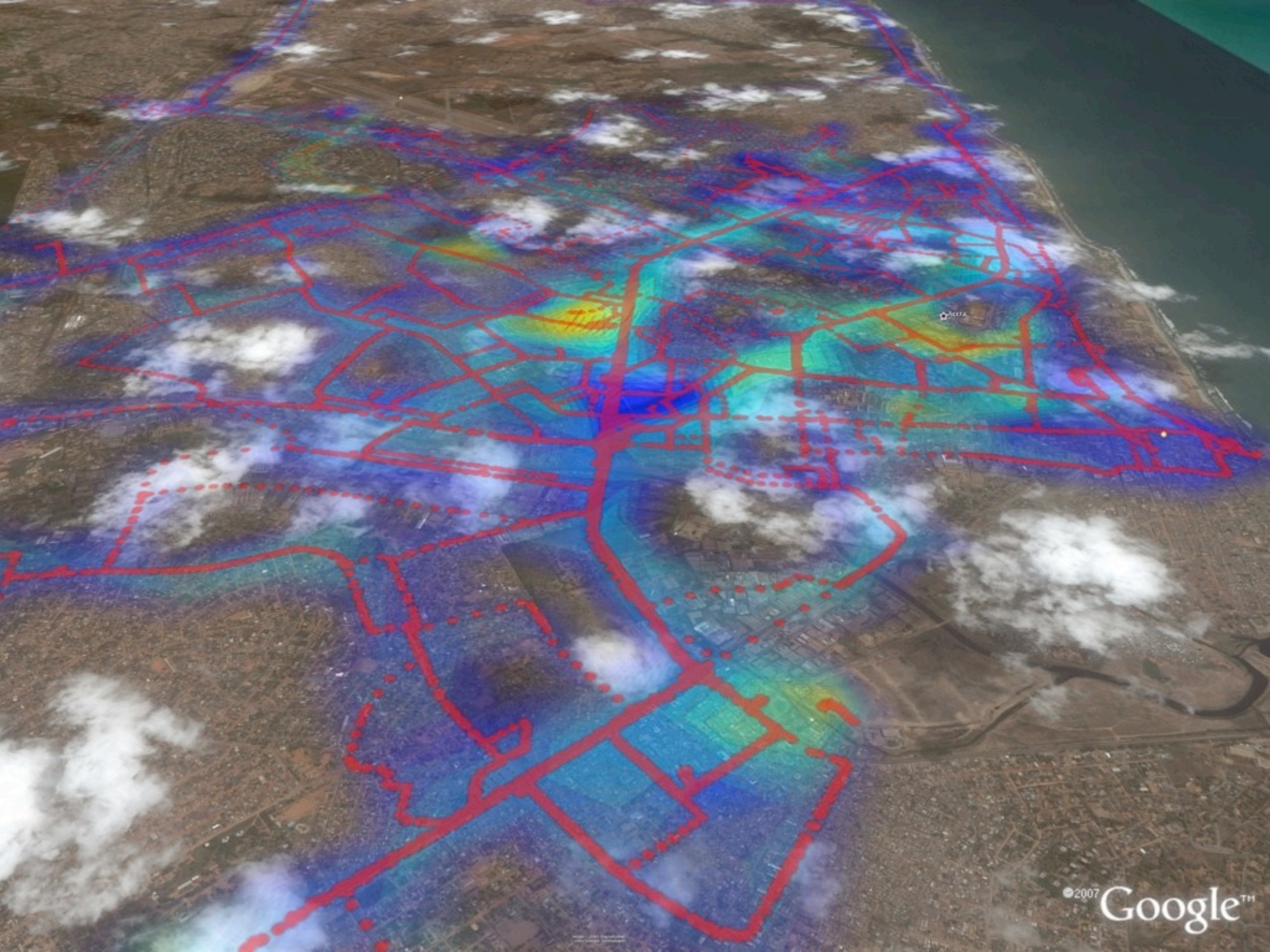
Share

Change

20 June 2007

17 Sept 2007

image credit: Alex Hoffard


©2007 Google™

Prius Effect

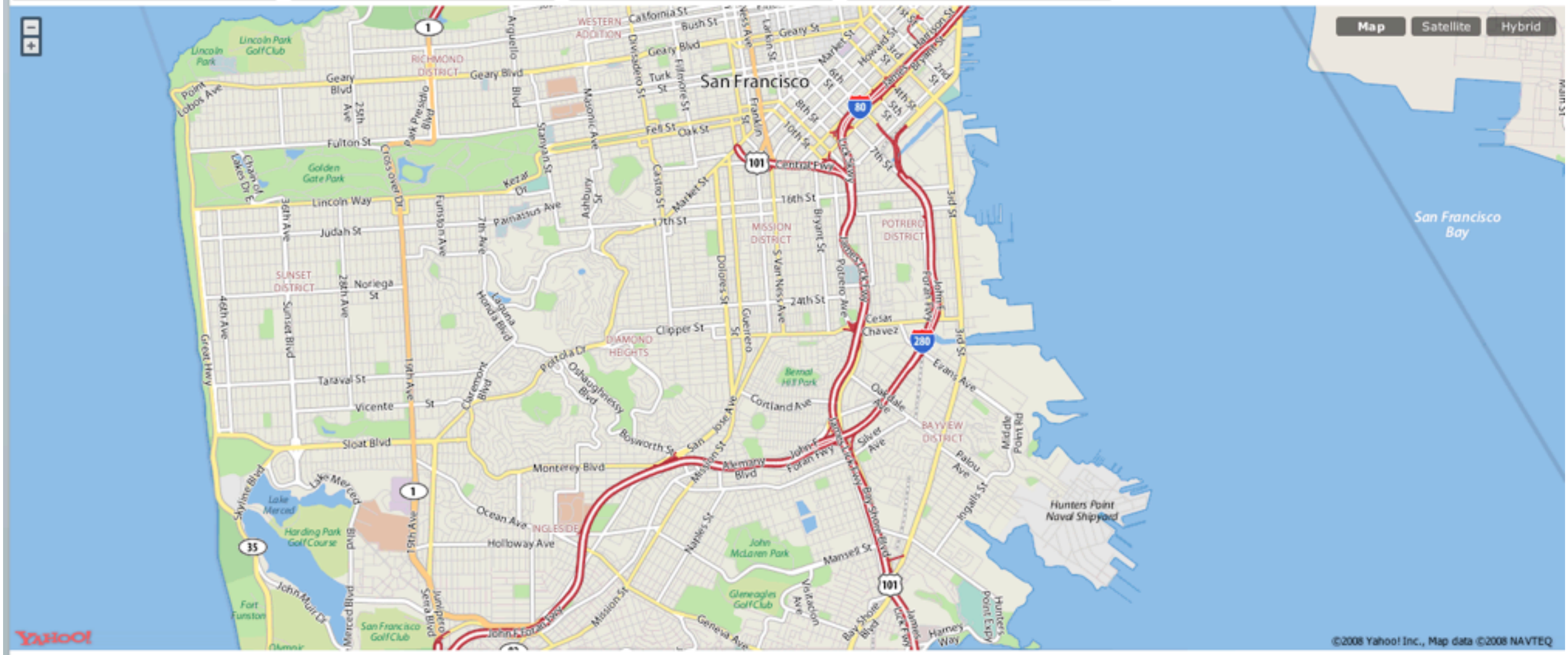
Eric Paulos
Allison Woodruff
Paul Aoki
Alan Mainwaring
RJ Honicky

Eric Paulos
Allison Woodruff
Paul Aoki
Alan Mainwaring
RJ Honicky

SAN FRANCISCO AIR QUALITY

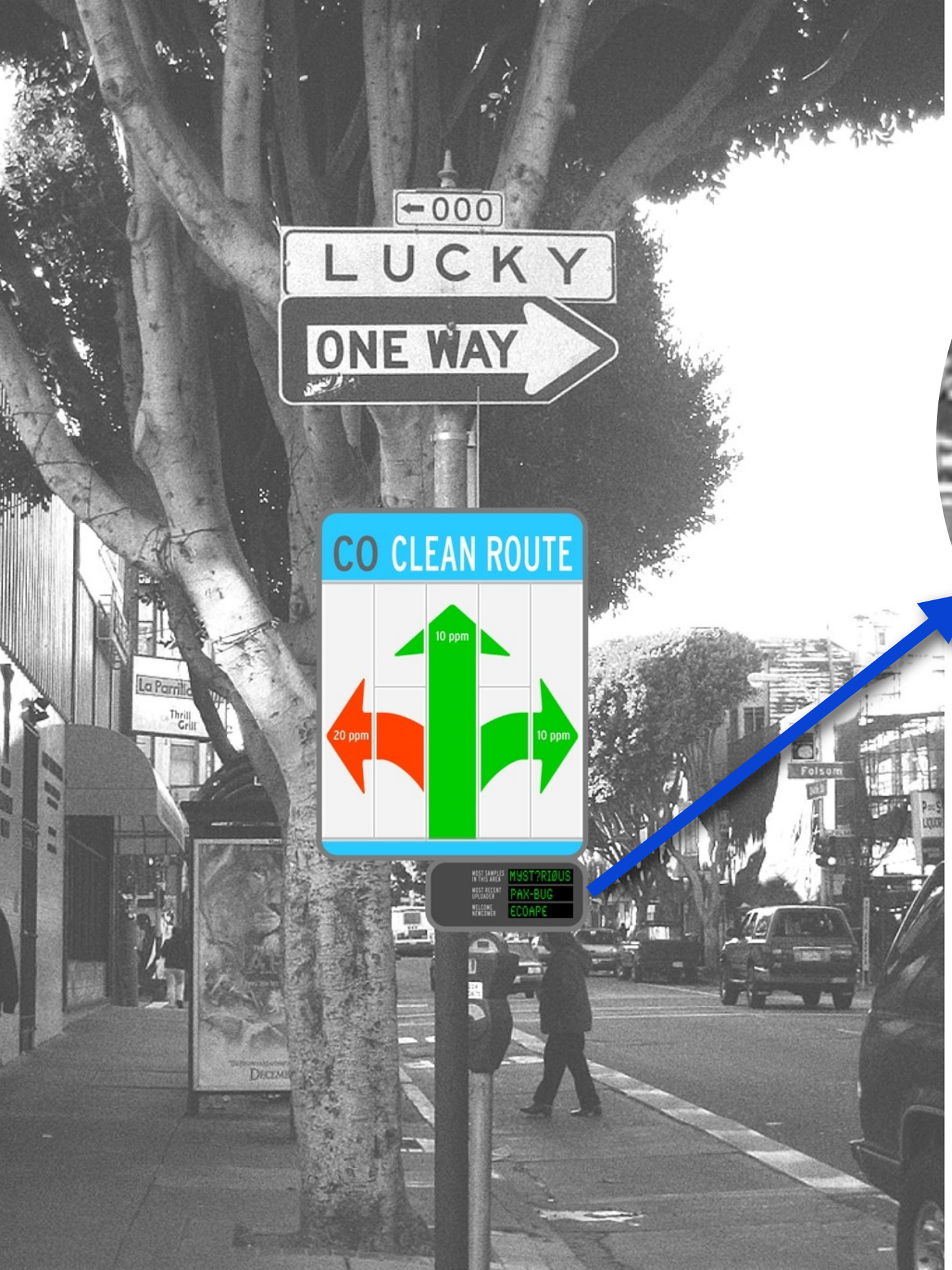
SELECT MODE | **CHOOSE DATE** | **CHOOSE SPEED** | **CHOOSE SENSOR**

DAY | Thr 24 July | FAST | Carbon Monoxide (CO)

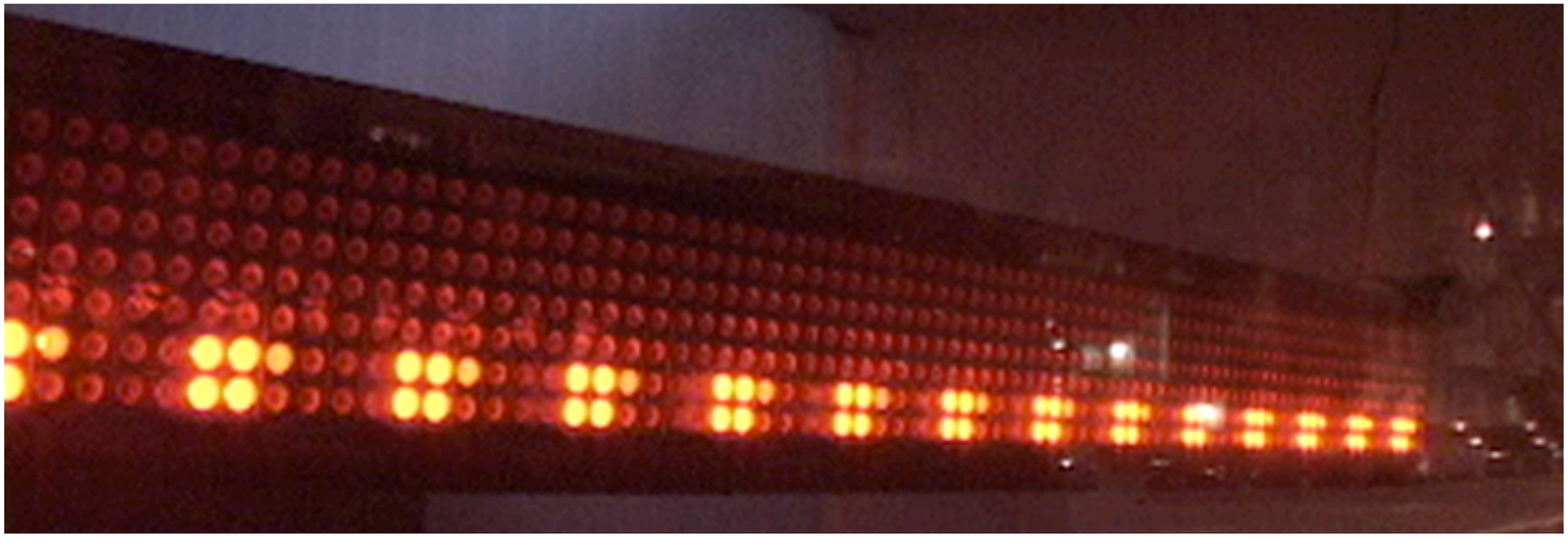


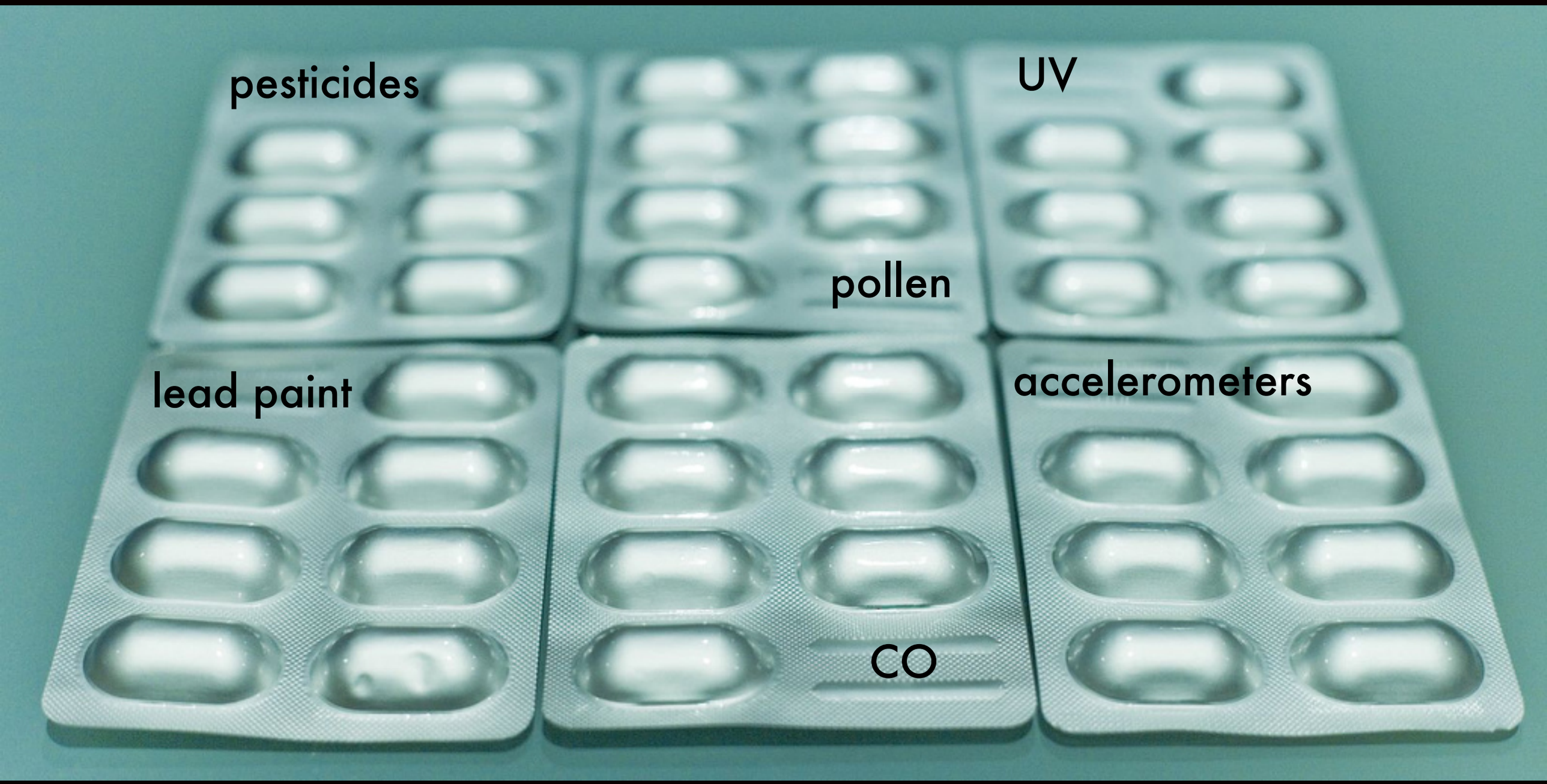
Fri Jul 25 09:03:19

38.4
PPM


←000
LUCKY
ONE WAY
CO CLEAN ROUTE
10 ppm
20 ppm
10 ppm
MOST SAMPLES IN THIS AREA
MYST?RIØUS
MOST RECENT UPLOADER
PAX-BUG
WELCOME NEWCOMER
ECOAPE
La Parrilla
Thrill Grill
Folsom

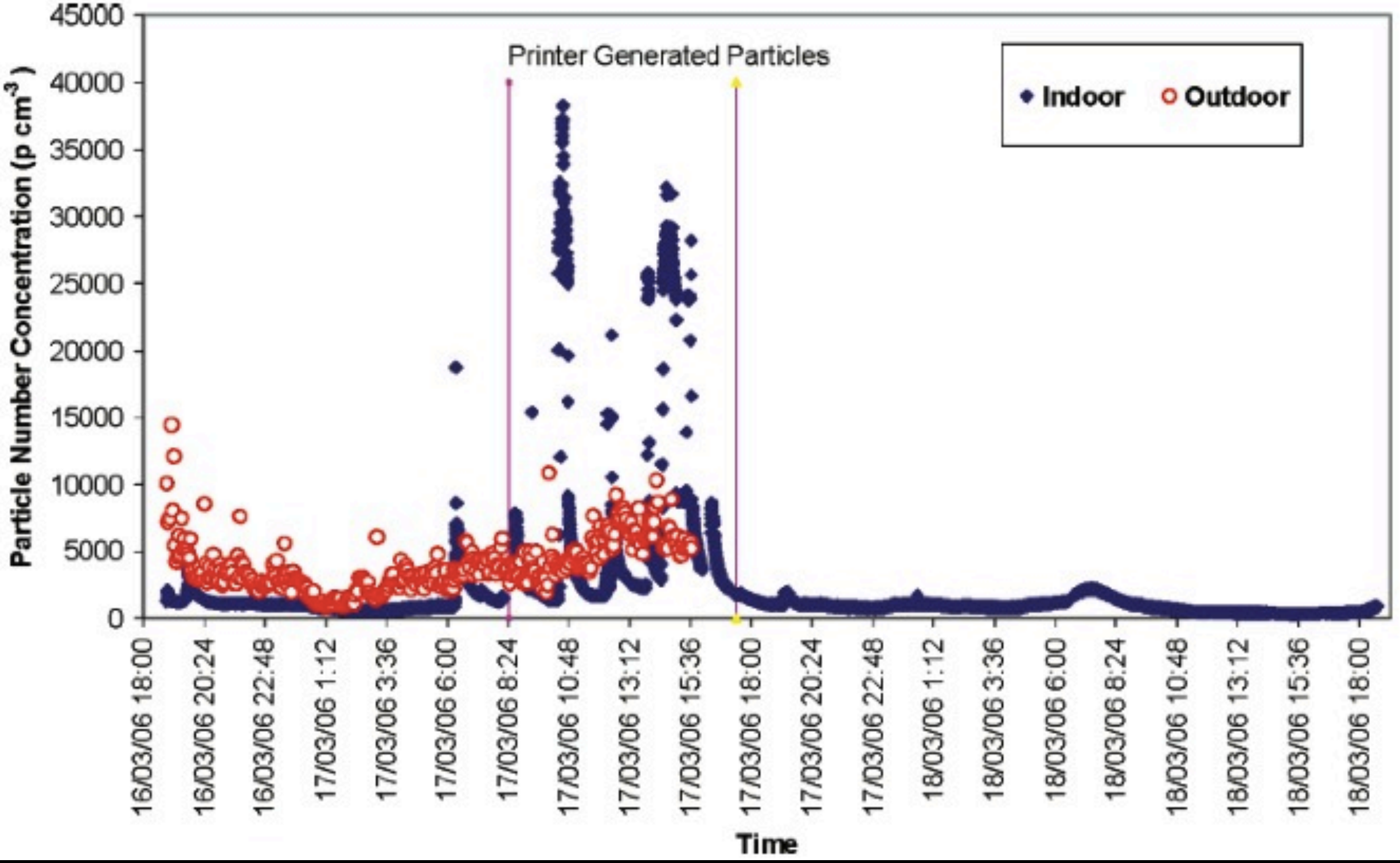
BREATHE




pesticides
UV
pollen
lead paint
accelerometers
CO

Stacey Kuznetzov

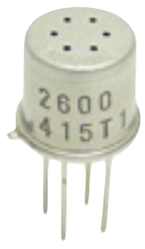
MYSTERIOSO?
Canon


Printer Generated Particles
Indoor
Outdoor
Particle Number Concentration (p cm-3)
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
16/03/06 18:00
16/03/06 20:24
16/03/06 22:48
17/03/06 1:12
17/03/06 3:36
17/03/06 6:00
17/03/06 8:24
17/03/06 10:48
17/03/06 13:12
17/03/06 15:36
17/03/06 18:00
17/03/06 20:24
17/03/06 22:48
18/03/06 1:12
18/03/06 3:36
18/03/06 6:00
18/03/06 8:24
18/03/06 10:48
18/03/06 13:12
18/03/06 15:36
18/03/06 18:00
Time

InAir

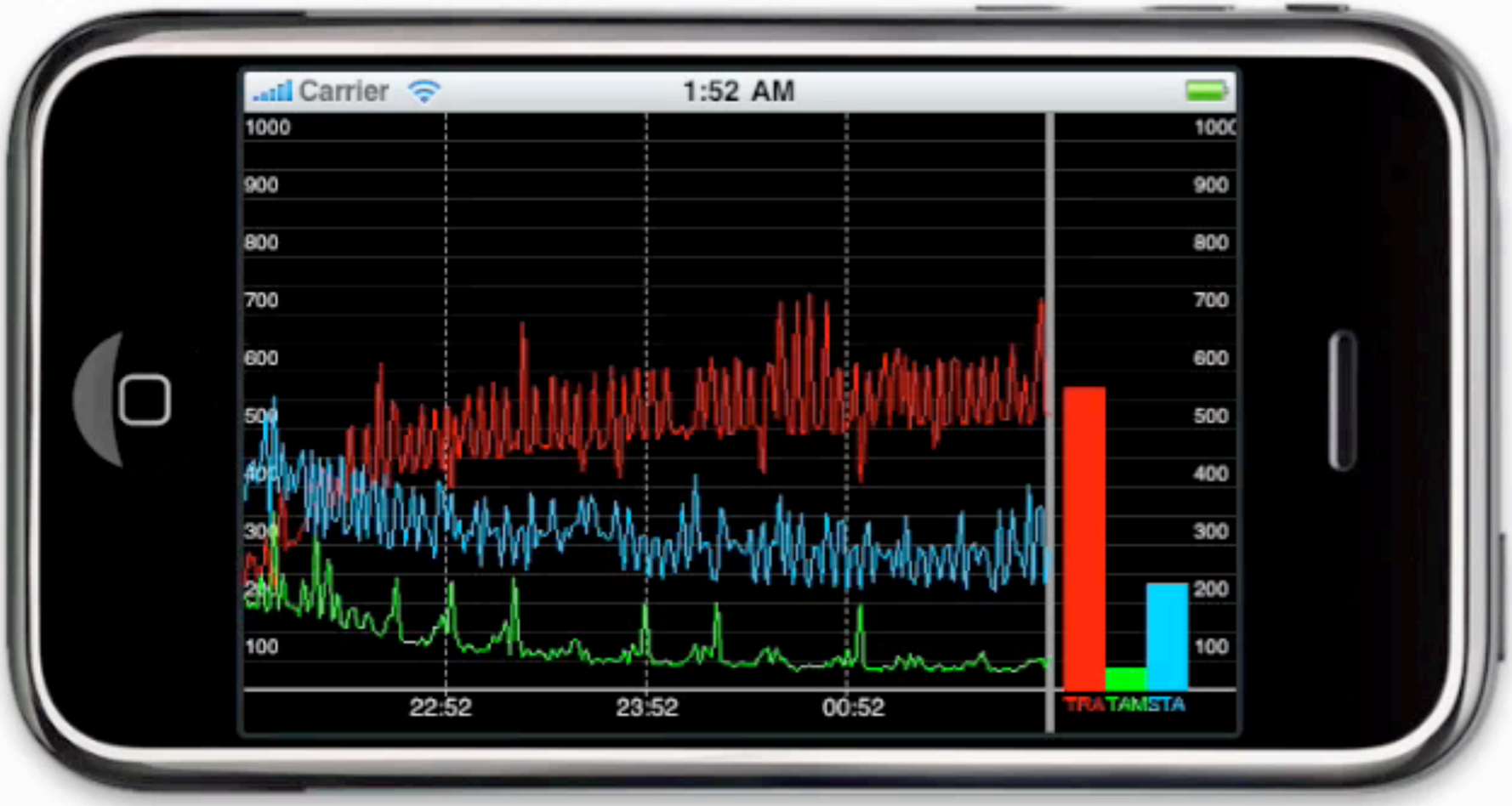
Sunyoung Kim

VOCs



CO

Particles



Sensor Sensibility

sensor legibility

designing for doubt

designing for activism

representation: good or evil?

neutral sensors

gripe interfaces

avoid creating culture of fear

The time for games has passed.

Now is the season for action

- Barack Obama