



Ian Pearson

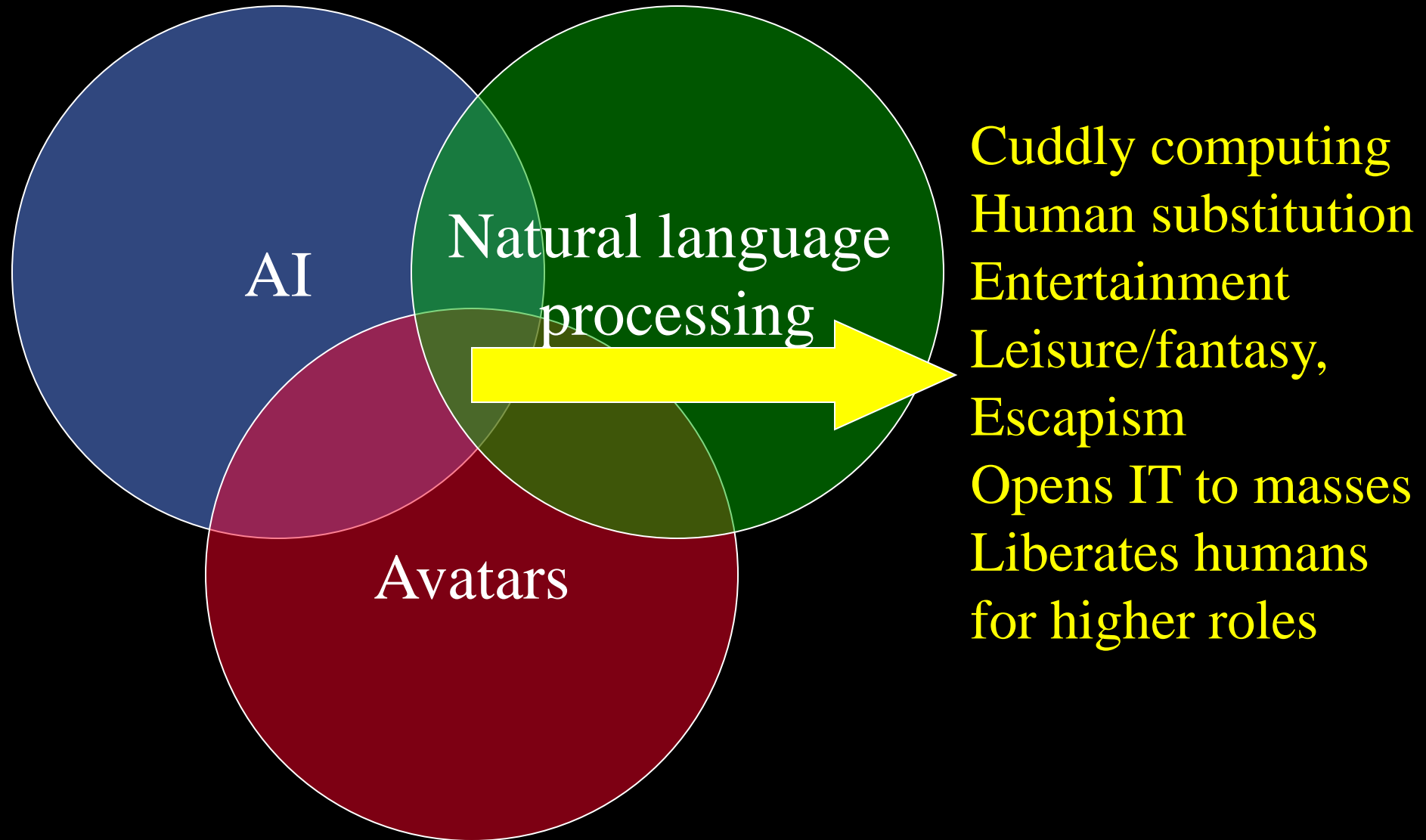
Science fiction v BT reality

The Hitch-hiker's Guide to the Galaxy

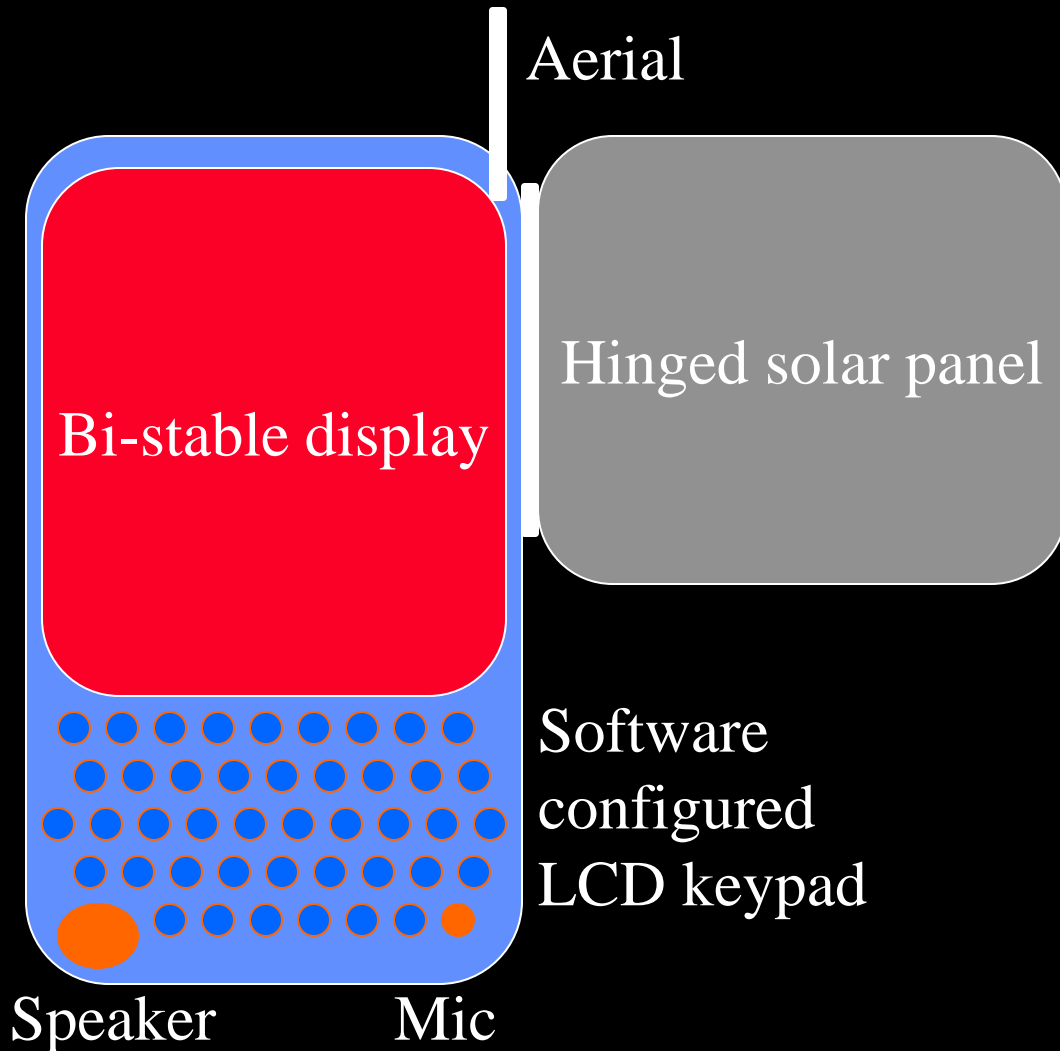
Inspiration for the Orion building lifts!



Synthetic personalities

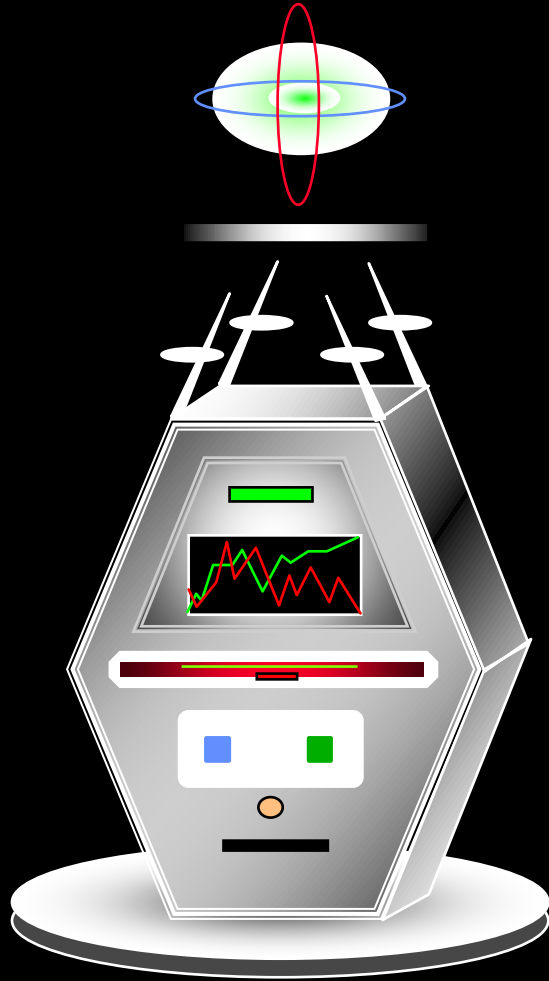


H2G2 Education terminal 2005?



Cost - very low
Symbiotic networking
(free calls)
Solar powered
(free energy)
2MB memory
10MHz 32bit chip
free net-based
education content

Deep Thought



- Smart machines may demand and enforce rights
- We won't understand the systems around us

Take 'The Forbin Project';

'2001 A Space Odyssey';

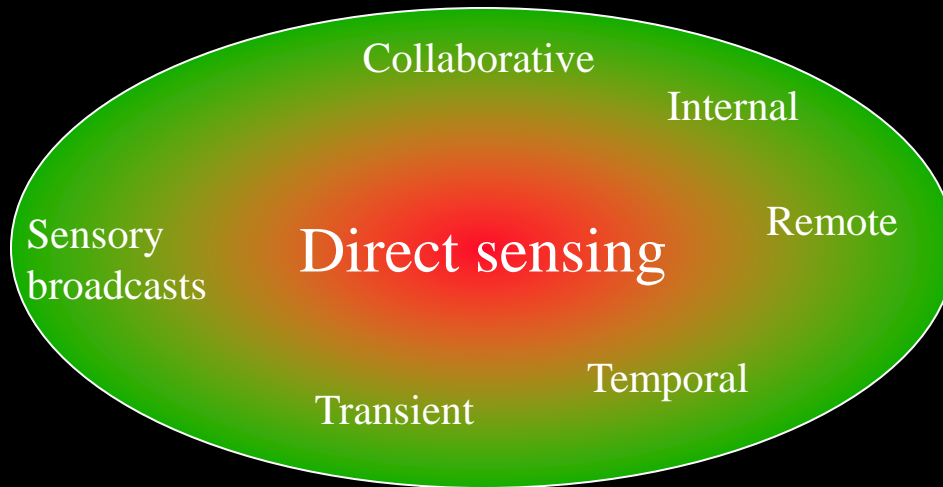
'Star Trek';

'Terminator'

And add Orac from Blake's 7



Distributed sensory system



Social

tribal closeness
hierarchical
temporal dynamism

Information

Information pressure
Flows
Connectivity
Logical truths
Perceptive truths
Locality/stickiness

Radiative

Audio
Video
Electromagnetic
Location
Radiation

Self

Experience
Meaning
Linking
Knowledge
Purpose
Motivation

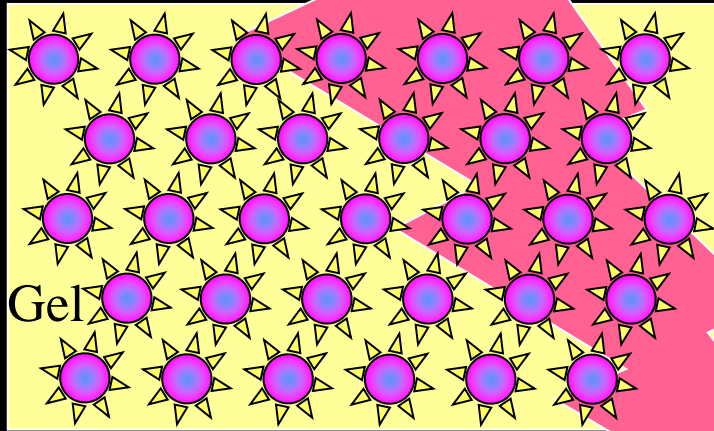
Network

PAN
LAN
MAN
WAN
Internet
Mesh nets

Tactile

Temperature
Texture
Pressure
Molecular

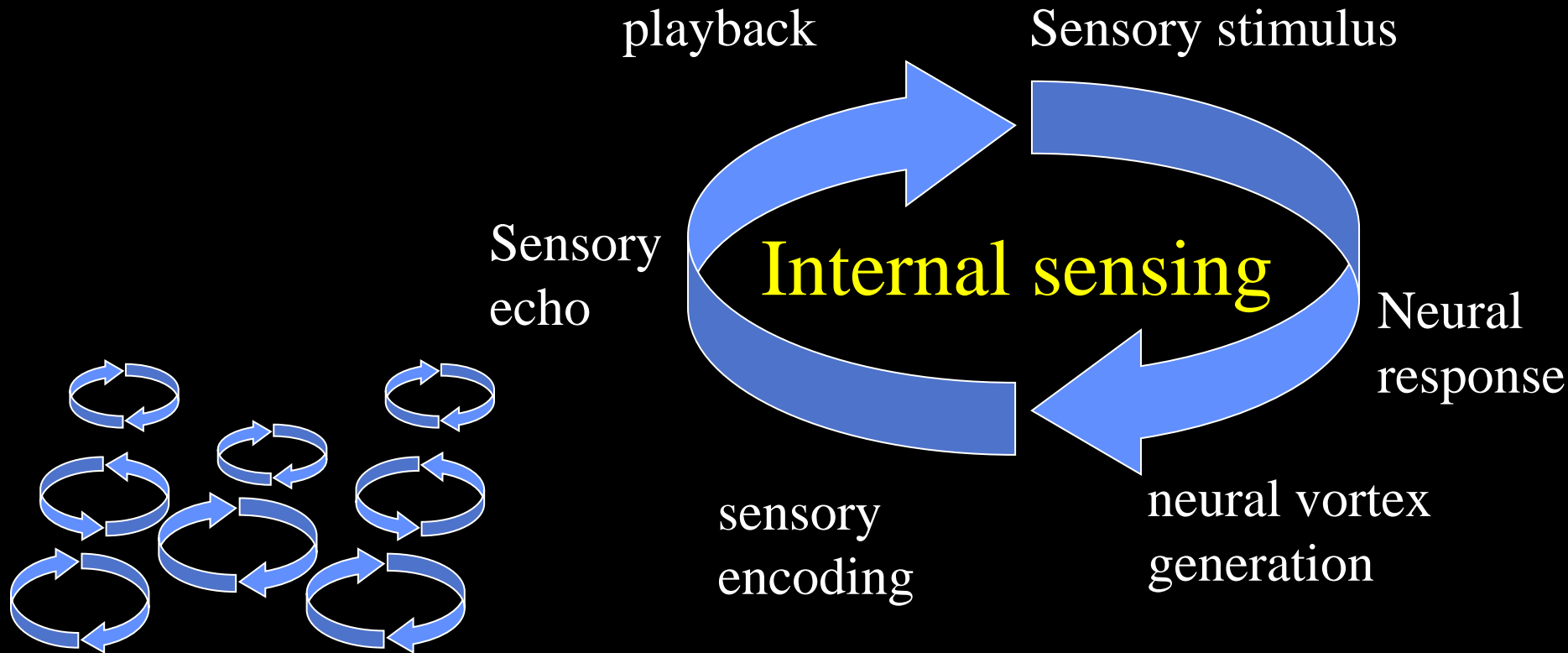
OB1 (optical brain mk1)



Optical 'hormone'

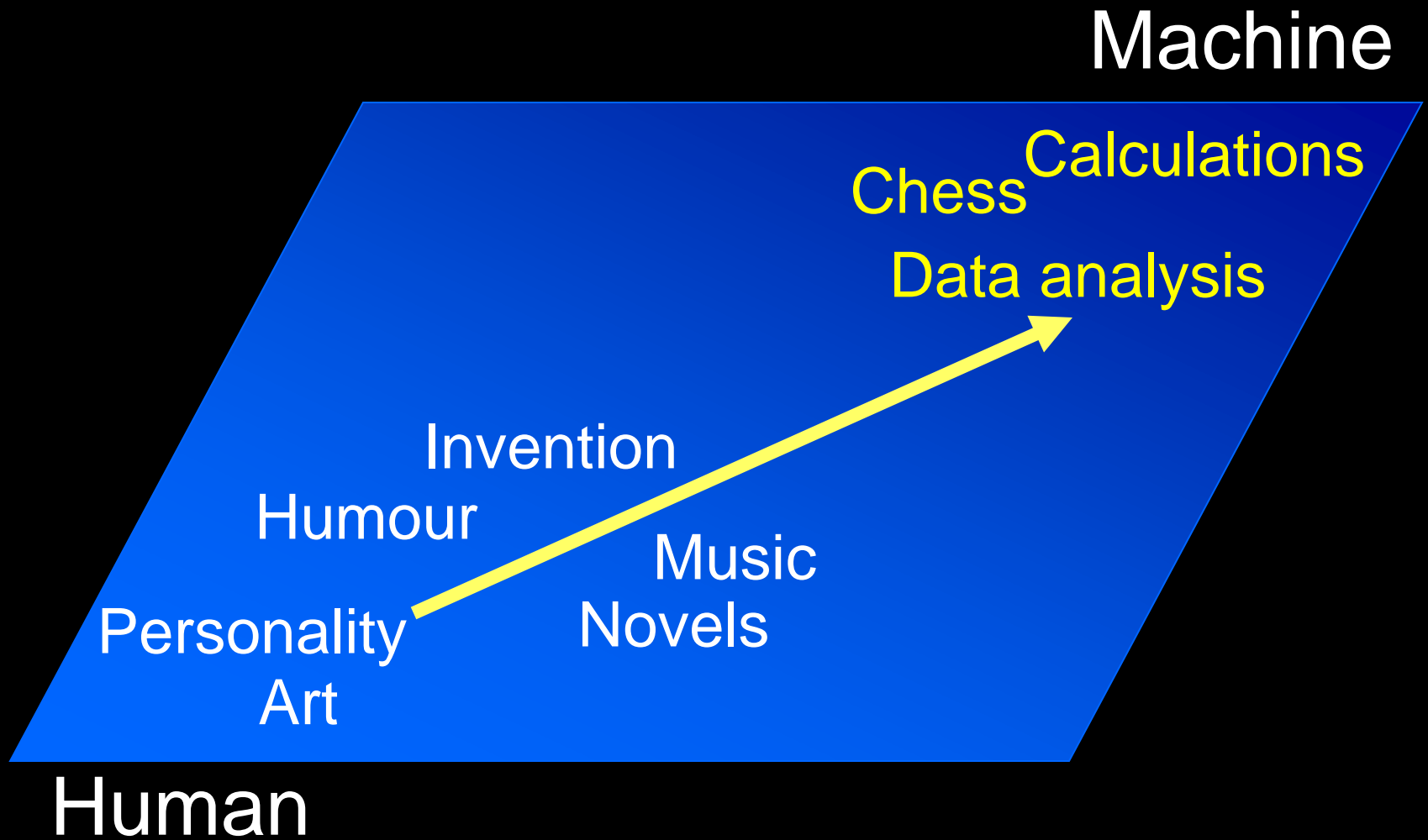
1 trillion neural processors in gel
Free-space optical connections
Neuron weighting by spectral sensitivity enables optical hormones
Embedded processors driven on digital/analog threshold
Use of Pauli Switches clocked by Heisenberg resonators
Bathed in data field from other processors

OB1 synthetic consciousness



**Neural interference
processing vortex**

AI Progress



Imagine a machine a billion times smarter than you!



1984 v Minority report

PICT

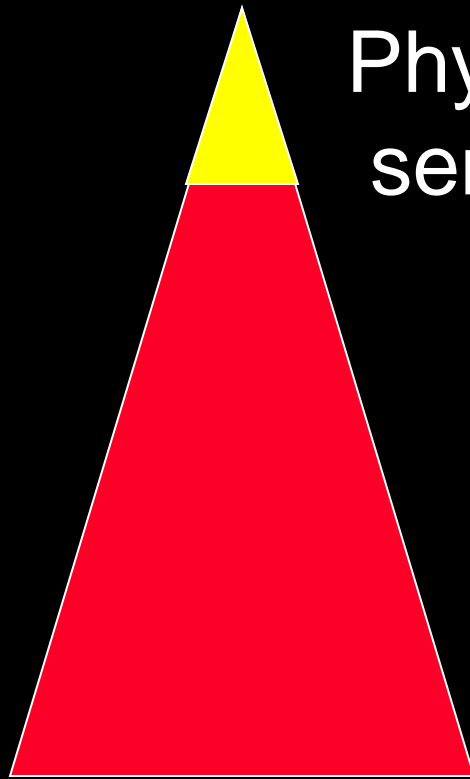
Thought recognition

Iris scan ID

Augmented reality interface

Personalised adverts

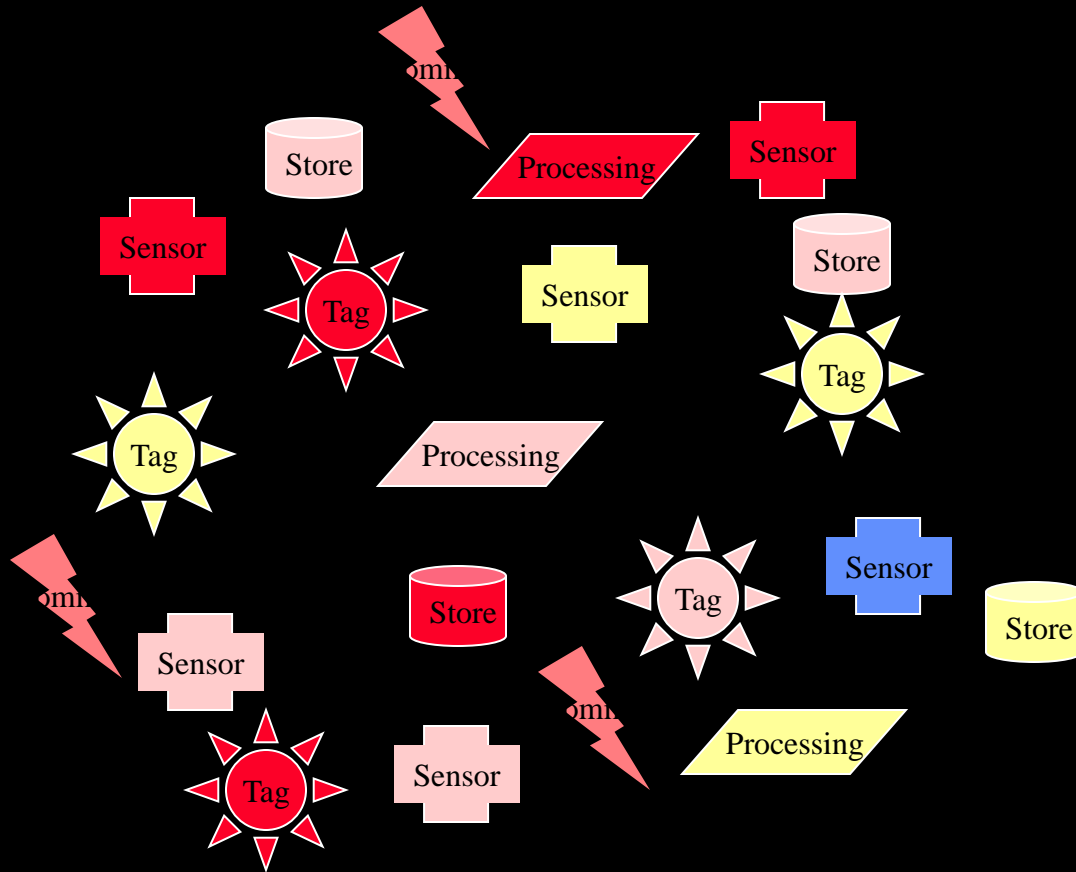
Ubiquitous & Pervasive computing



Physical -tags, activators,
sensors

Cyberspace - data,
algorithms, services

Activators - smart environments



Urban environment peppered with processors, tags, data stores, sensors and communicators.

Harry Potter

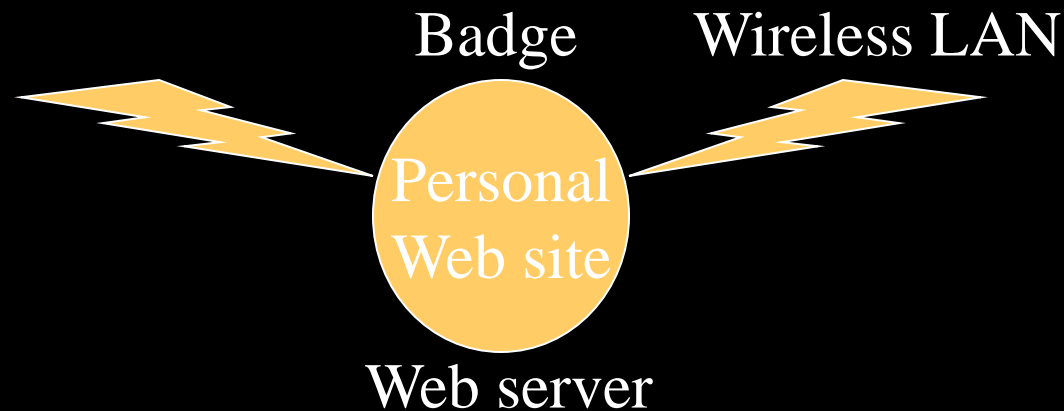
- Reactive paintings - Reflex reactive ads
- Video photo albums - digital paper

Positioning - virtual air

- Static -satellite (GPS and Galileo), 3G
- Urban - beacons in street, phone boxes
- Internal - PICT triangulation or beacons
- Dynamic - personal & body area nets

- Can be mm accurate
- Systems can interact - digital bubbles

The Golden Snitch and the wearable web site



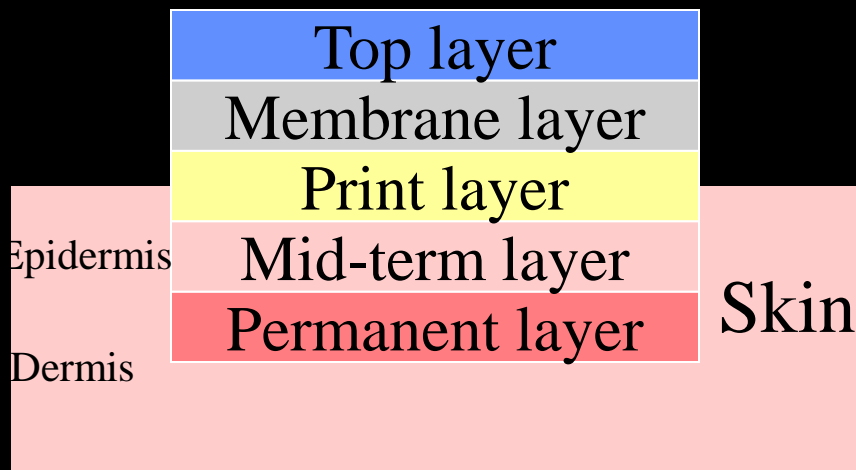
People can radiate their personality and business in a digital bubble that travels with them in a wearable wireless web server

Logan's run



Active skin system overview

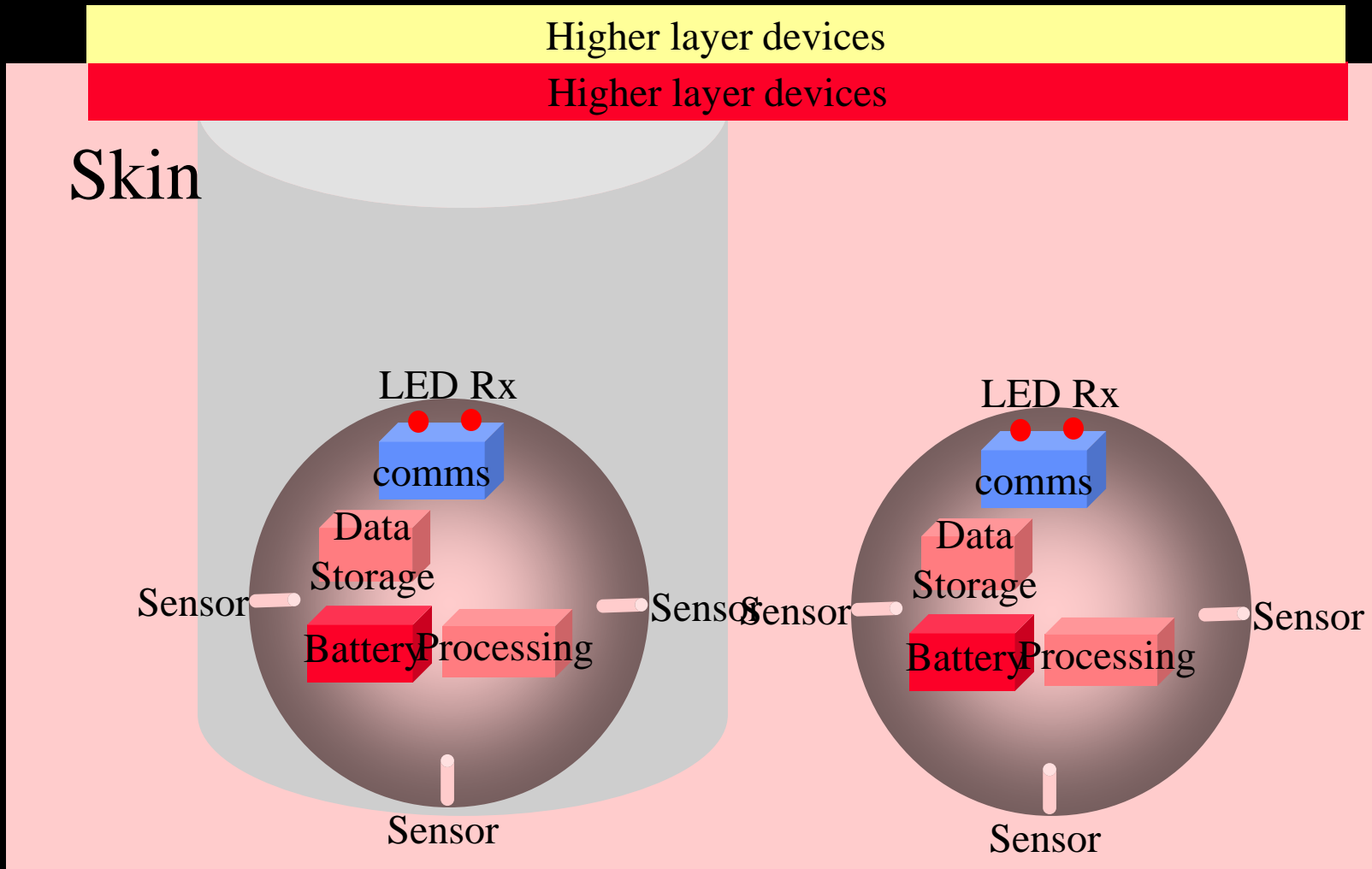
Inspired by the patches on Logan's Run



e.g. watches, pagers, phones
e.g. drug dispensers, interfaces
e.g. drug filters, haptics, sensors
e.g. temp ID, smart cosmetics
e.g. ID, medical monitoring

Wireless skin capsule

May be inserted into conduit or on its own



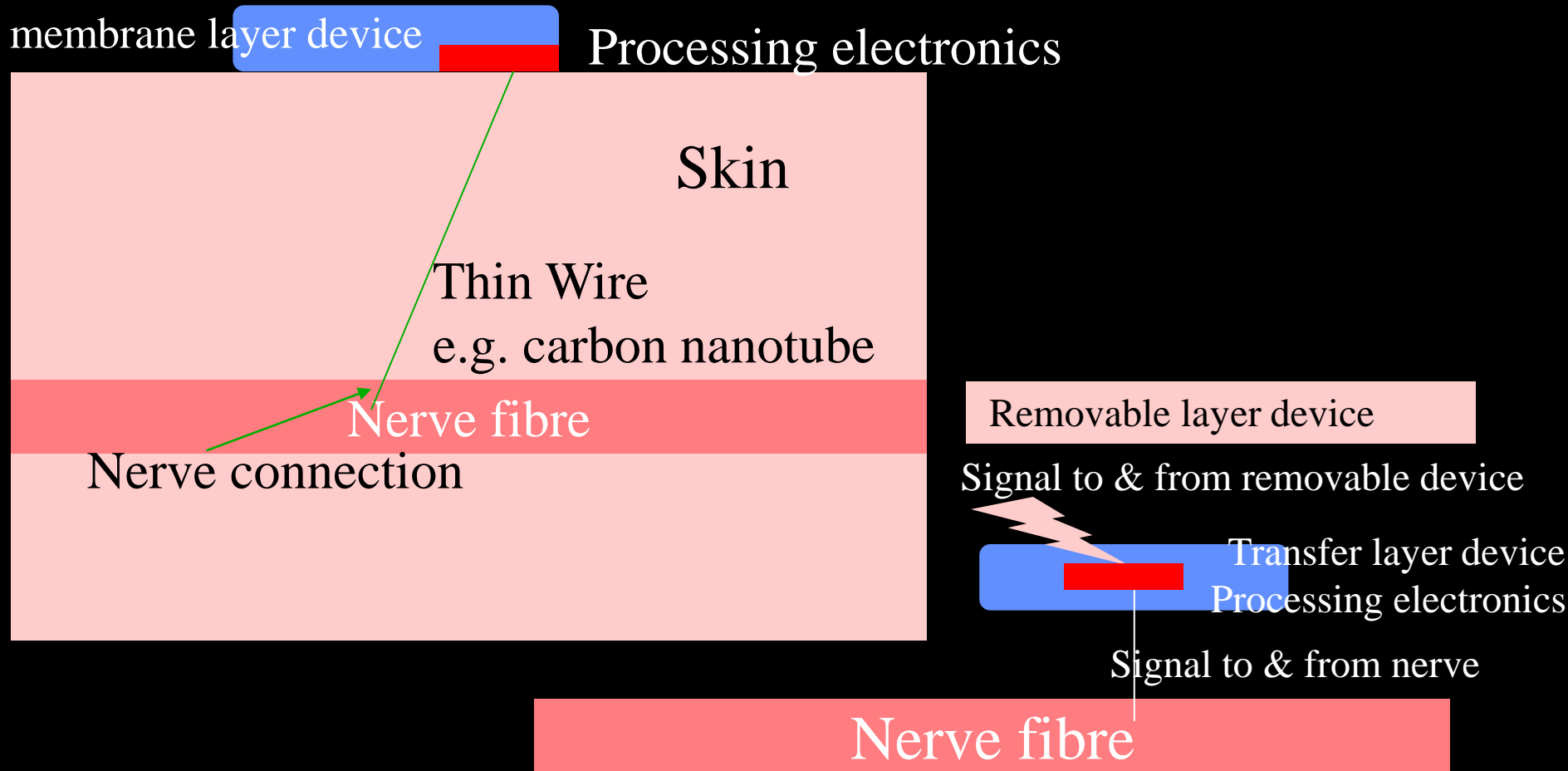
Thought recognition

Quatermass and the Pit

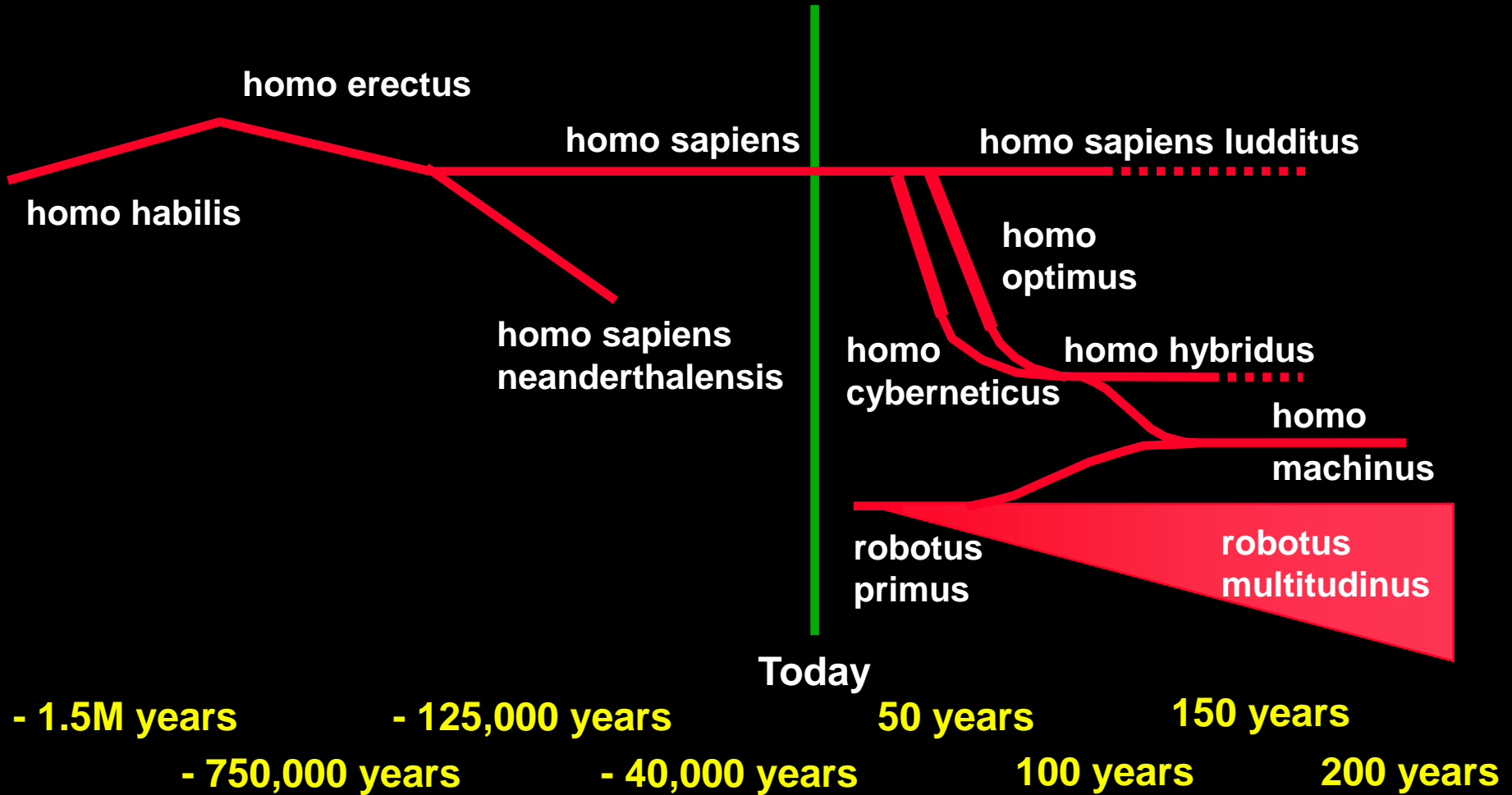
Total Recall

The Matrix

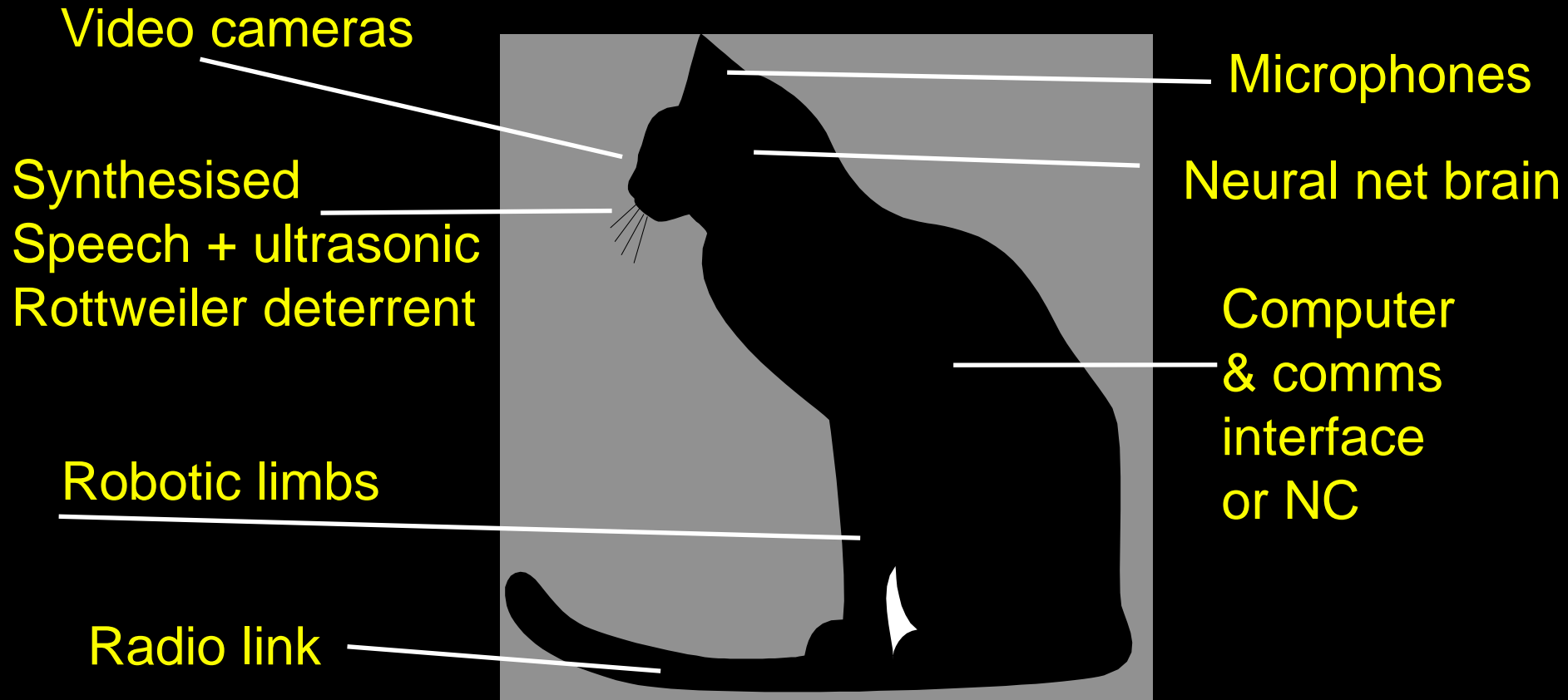
Active skin nerve connection - record and replay sensations



Human-machine Convergence will we be assimilated?



K9 v home robotics



No fleas, no dead mice, no 'presents', no hairs, no kittens....

Dr Who v Virtual time travel

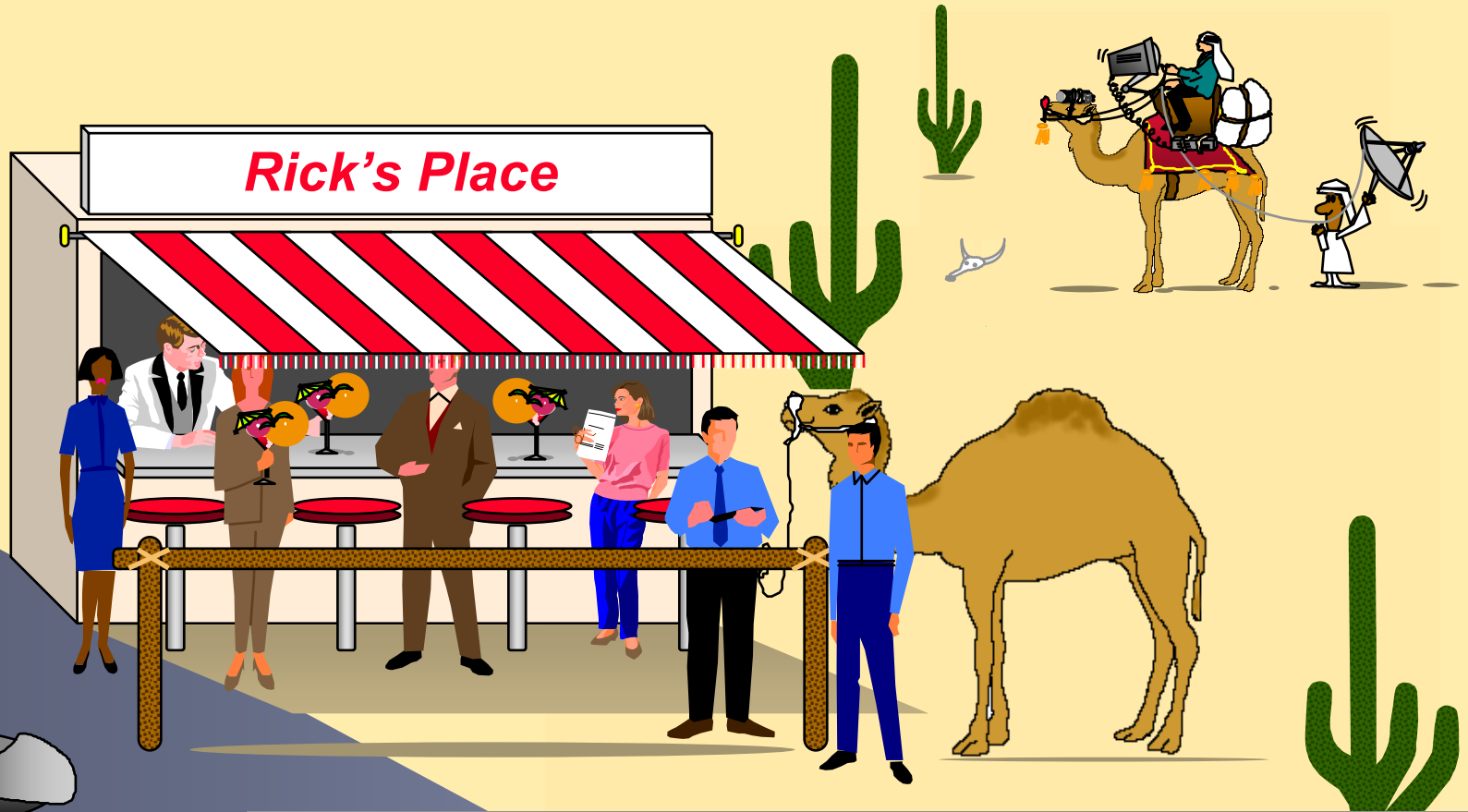


Star Wars Holographic tabletop display



Tron - cyberspace
The Matrix - brain link
Star Trek - holodeck

Future virtual environments



Future nervous system links can make virtual environments full sensory, just like reality



Virtual Environments will be mainly used for sex. Discuss

Barbarella - pleasure pills

Logan's Run - the circuit

Lawnmower Man - cyberspace

Demolition Man - more pleasure pills

Sleeper - orgasmatron

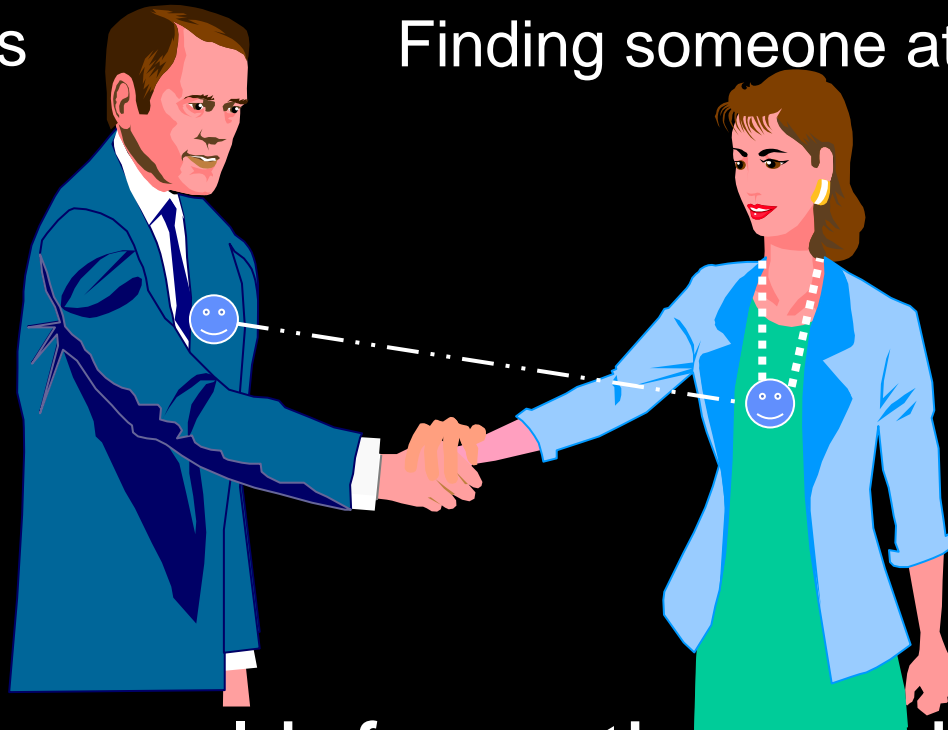
Ego badge

Information:

Name(s)
Interests
Sexual preferences
Availability
Desperation level

Technology:

Radio;
Ultrasound;
Infrared



Business:

Making useful contacts
Conference networking
Finding someone at an airport

Social:

Night Clubs
and parties
Making new
friends

Filtered personal information exchange
between badges

Digital mirror



Computer-enhanced socialisation



People may use
image customisation
and avatar technology
to fit people into their
fantasy world.

Reality is optional!

Beauty is in the eye of the beholder

Future teledildonics



Synthetic visual environments

Remote triggering - orgasm by email

Electronic bonding

Links into nervous system

Ultimately direct brain link

Polymer gels in dildonics



Bio-infotech progress



Nervous system links - experience both sides at once

Personality modification

Telepathic linking via bionic implants

Shared consciousness, communal mind

Shared bodies

Use someone else's body via mind swapping

Direct sex between minds - get into partner's head

Shared virtual environments



**Now let's look at the Dark Side
Feel the Force!**

Genetic engineering

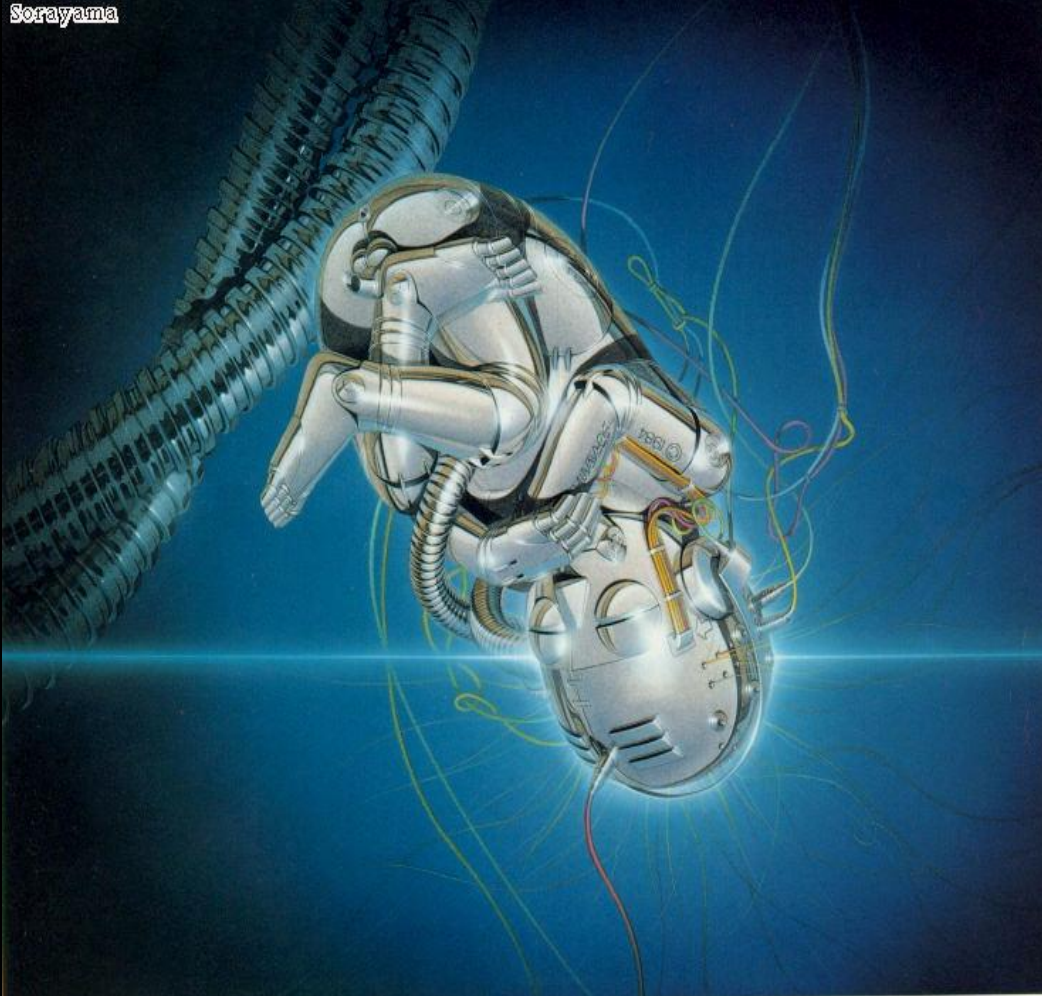
**Demon seed
Blade Runner
Gattaca**

Foetal customisation?



Woman + machine = ?

Sorayama



DNA Optimisation

+

New bases

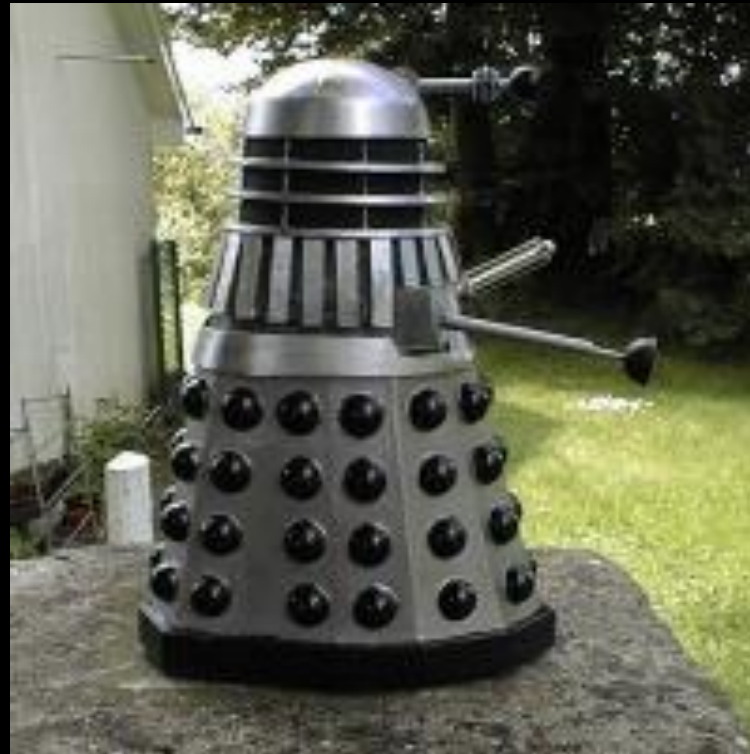
+

Smarter-than-man
machines

=

Trouble

Woman + machine = Daleks?



**Home DNA Kit available now
from Discovery stores for \$80**



Home polio assembly kit by 2010?

**Take War of the Worlds
add NBIC Convergence**

**Swarm
Andromeda**

Smart bacteria

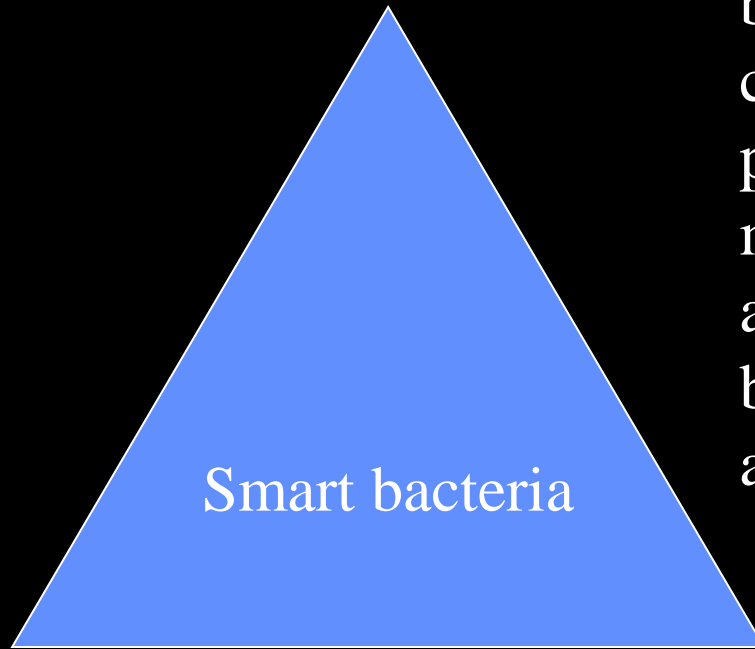
Biotechnology

Hybrid self-reproducing bacteria that contain synthetic processing and memory but exist and compete in both natural world and cyberspace

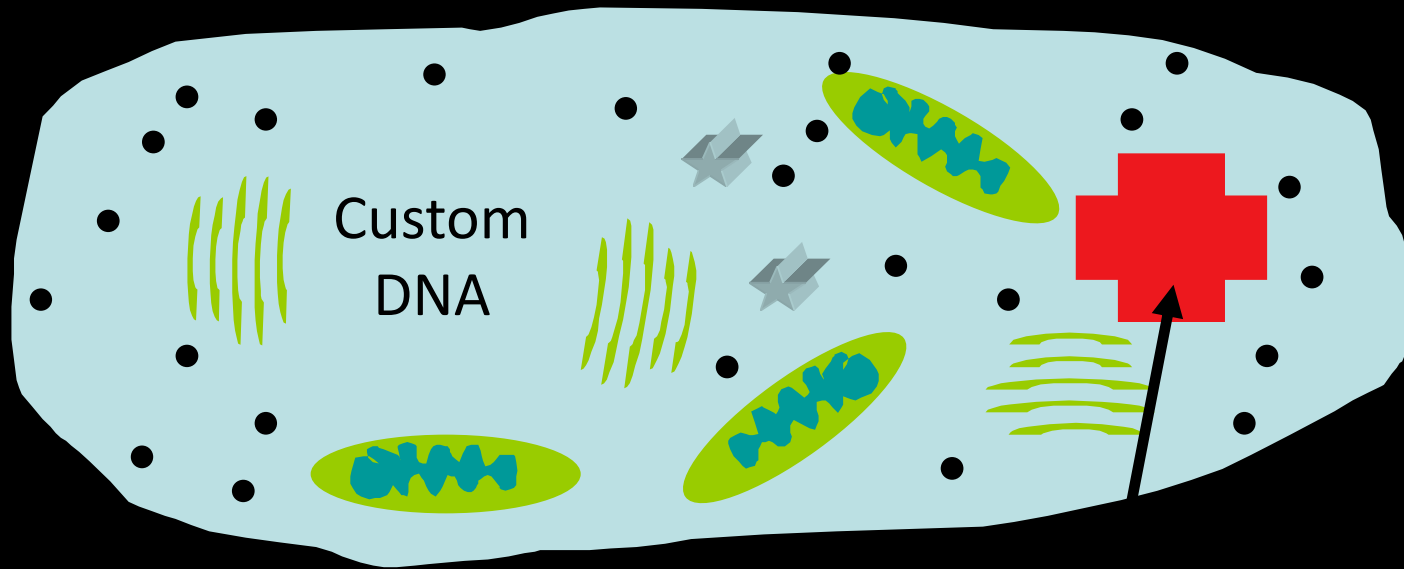
Smart bacteria

Nanotechnology

Artificial Intelligence



Future risks - e.g. Smart bacteria



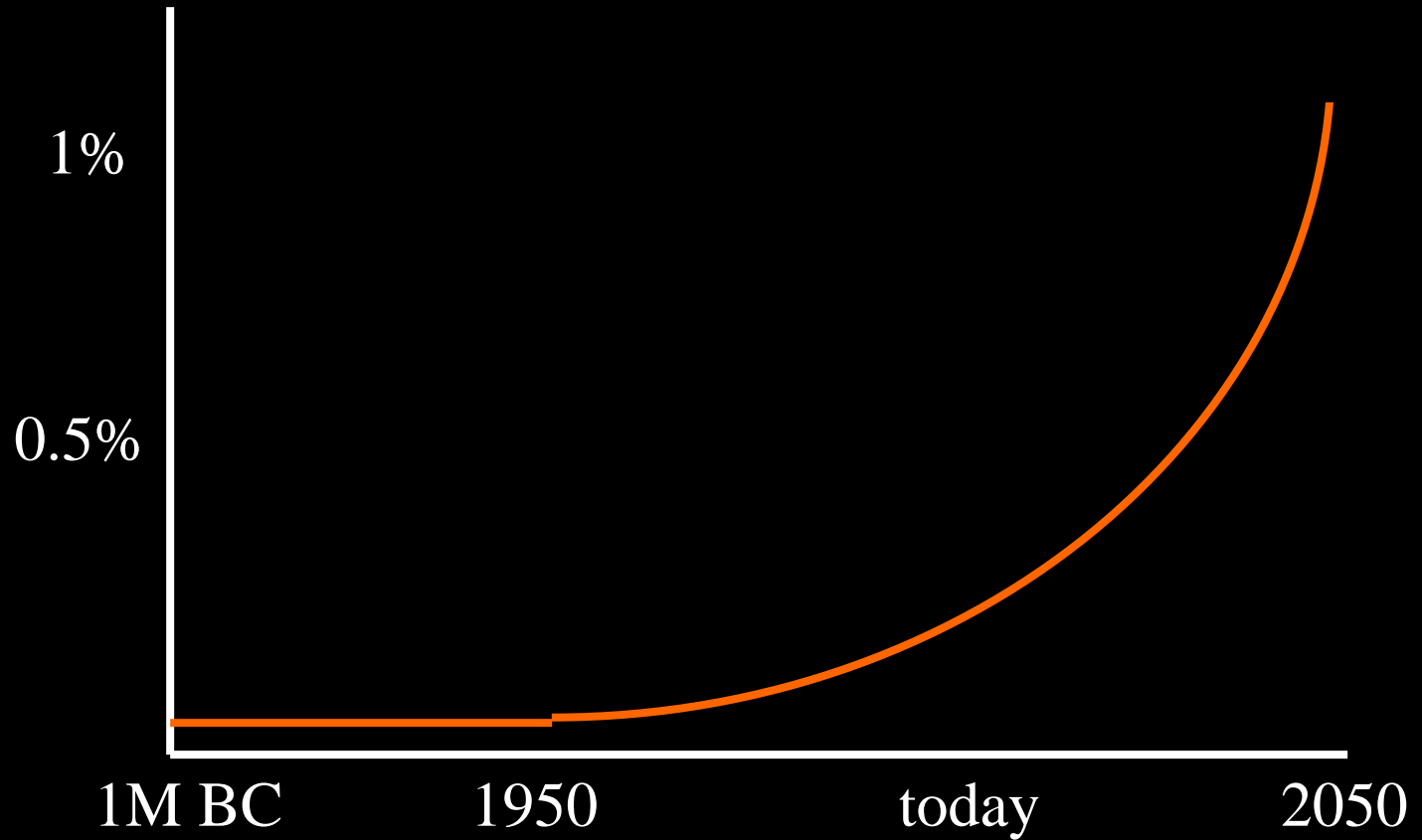
1 micron

Molecular circuit
assembled by cell

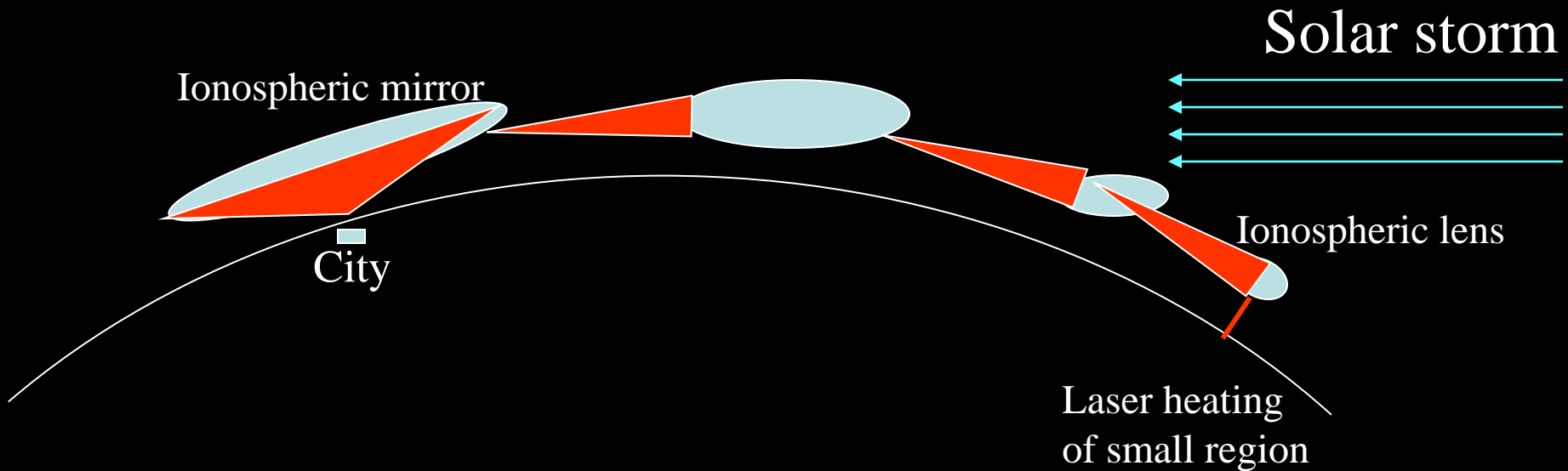
Bacteria linked together via infrared, to make
sophisticated self organising circuits

Increasing danger

Probability of extinction-level event per year



James Bond - space weapon: Ionospheric cascade gun



Small region of ionosphere heated by laser, and acts as a lens of mirror to harness solar wind to create larger lenses and mirrors. Resulting cascade could redirect high proportion of incoming solar wind onto single city.

A 3km x 3km region would receive 100kw/m^2 and would be destroyed quickly

Brazil = Niku

The worst of the Dark Side!

Micromanagement

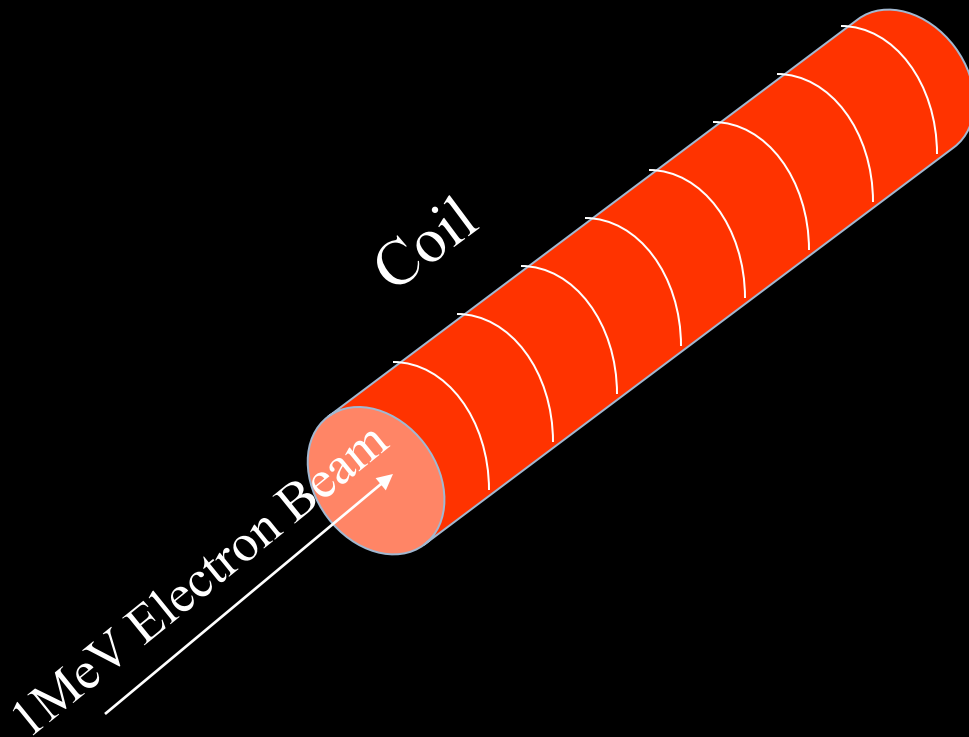
Forms!! You'll need a 27b/6

Security paranoia

Centralisation

Electron pipe

1MeV Beam = 10^{20} Hz Bandwidth



We can guide photons through photonic crystals. Is there an equivalent structure using superconducting materials that will work with high energy electrons?

Or Carbon nanotubes?

Challenge - let's give everyone The Force

- Ubiquitous smart environments with haptic interfaces - feel the force
- Virtual telekenesis - wield the force
- Virtual telepathy - remote sensing & comms
- Deep insight - biofeedback

Thank you

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