

Telepresence

Information Architecture
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Introducing . . .

sensorama

The Revolutionary Motion Picture System
that takes you into another world
with

- 3-D
- WIDE VISION
- MOTION
- COLOR
- STEREO-SOUND
- AROMAS
- WIND
- VIBRATIONS



© PATENTED

SENSORAMA, INC., 855 GALLOWAY ST., PACIFIC PALISADES, CALIF. 90272
TEL. (213) 459-2162

Sensorama (1960) by Morton Heilig, a precursor of immersive, multi-sensory technologies that enable telepresence.

Industry Typology

Communication

- Messaging
- Chatting
- TV phone

Space Development

- Satellite Operation
- Construction

Medicine

- Medical Surgery
- Health Monitoring

Entertainment

- Gaming
- Virtual life
- Tourism
- Exhibition

Work Space

- Management
- Business (Networking)
- Meeting / Presentation

Education

- E-learning

Marketing

- Advertising
- Research

Remote Observation

- Security
- Research
- Traffic Watch

Location Typology

Home

- Anywhere in Houses

Hospital

- Operation Rooms
- Examination Rooms
- Emergency Cars

Safe / Force

- Military
- SWAT
- Police

Outdoor

- Parking Lots
- Parks
- Streets

Industry

- Companies
- Factories
- Stores

NASA

- Space
- Satellites
- Other Planets

School

- Advertising
- Research

Tough Area

- Nuclear Electric Plants
- Ocean Floor

Amusement

- Video Game Arcades
- Amusement Parks

Telepresence

Tele (at a distance) + Presence:

Giving the sensation of being present while at a distance.

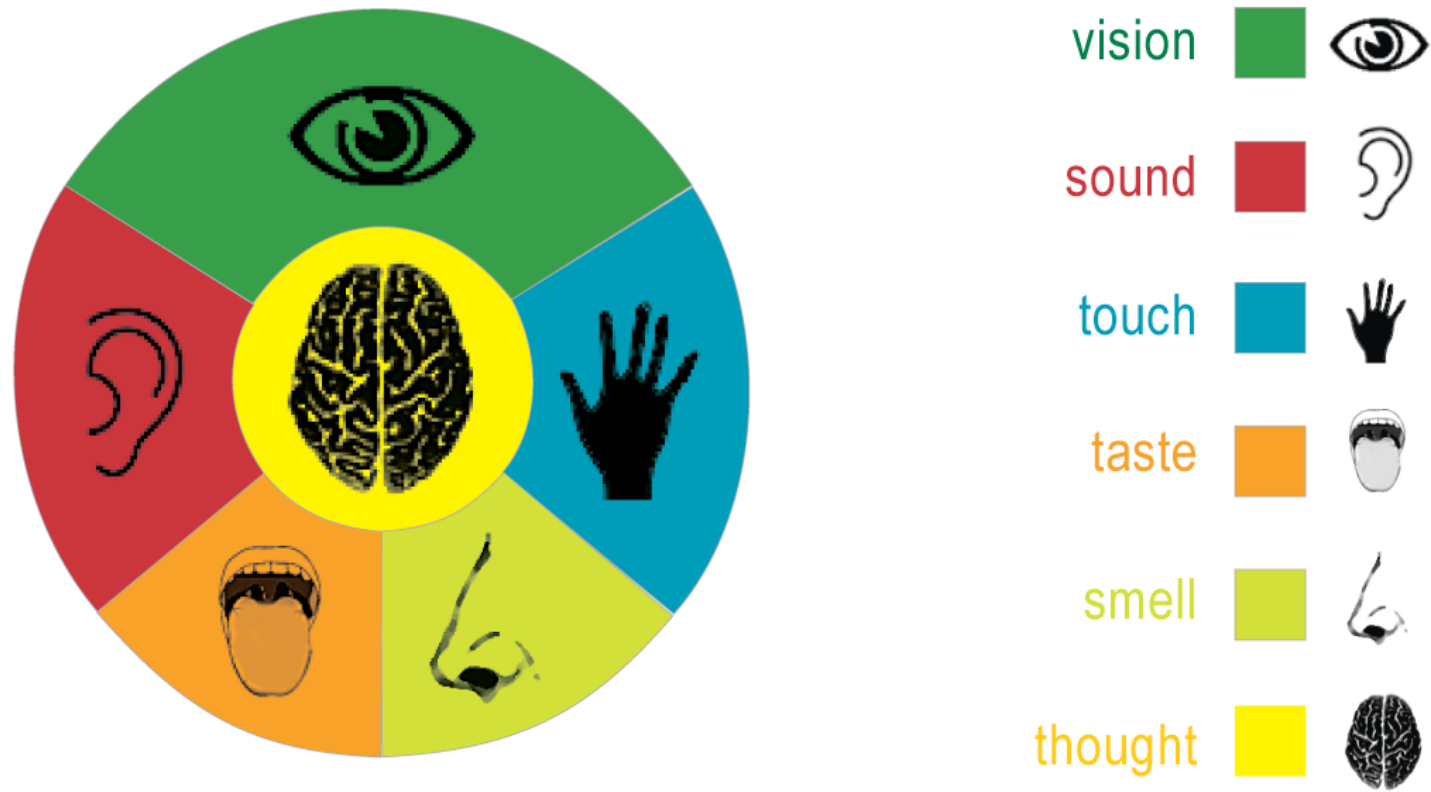
Range of telepresence

There are varying degrees to which telecommunications technologies enable telepresence. Some afford a lot of telepresence, while others not at all.

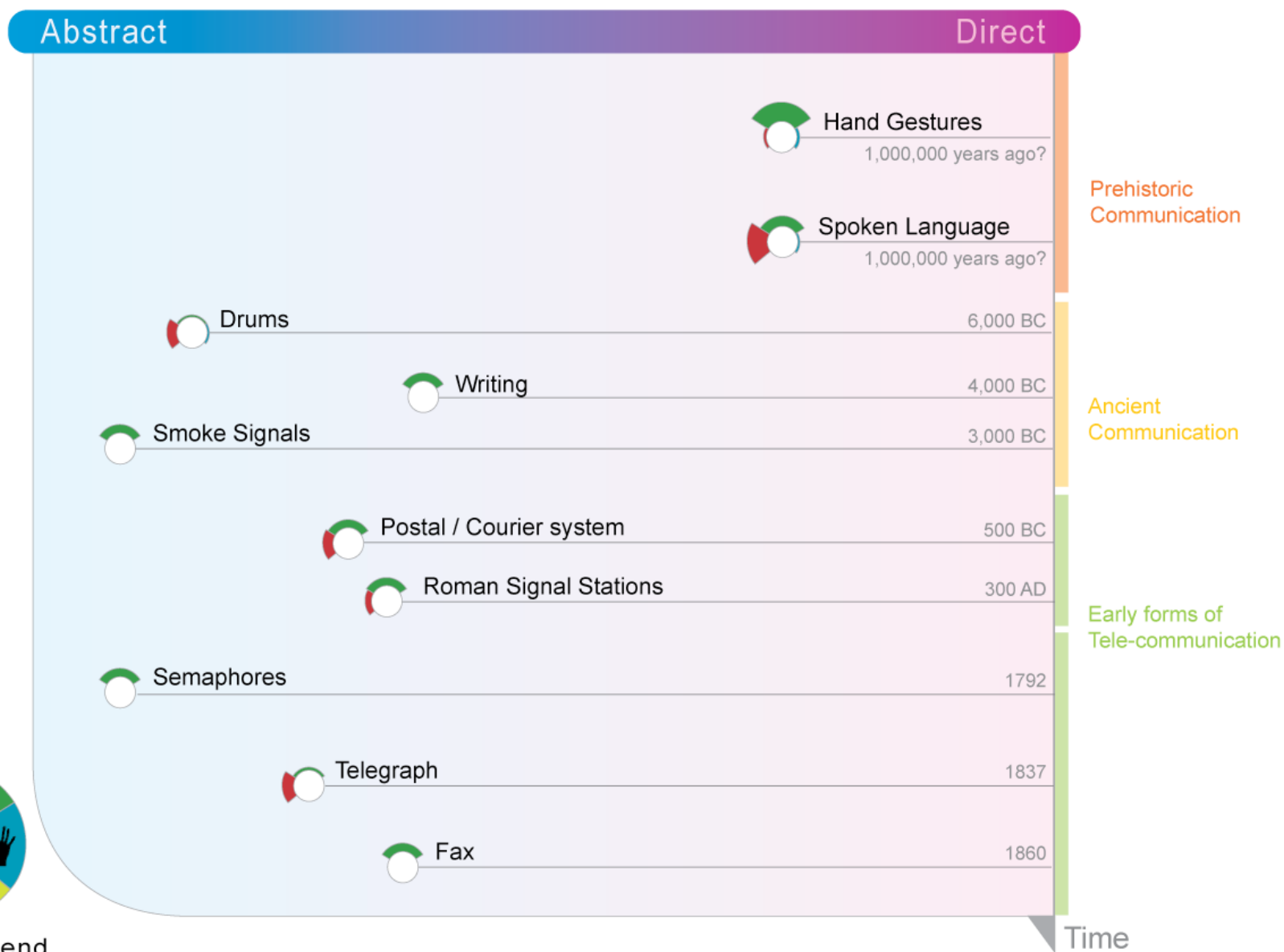
What impacts the level of telepresence?

- How much time does it take? (latency)
- How many senses are involved? to what extent?
- How immersive is the device?
- How much control do those communicating have?
- How direct (or literal) is the communication?

Senses: Modes of Communication



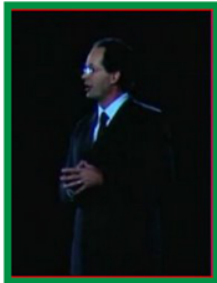
Timeline: Early forms of Communication



Sense Legend

The extension of Senses

Current technological capabilities



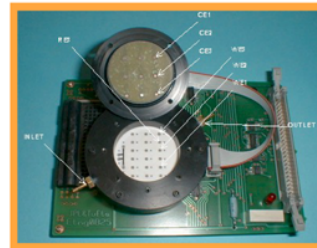
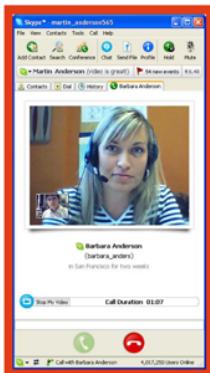
Light/Motion/Radiation
LED/Display devices
Optics/ fibre optics
Lenses
Camera



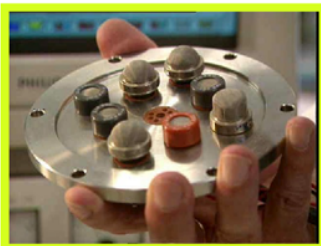
Brainwaves as
input signals



Frequency
Telephone
Semiconductors
Cables/ satellites



Pressure/Weight/
Heat/Temperature
Haptic Devices
Digital Fabrics
Physical computing



Electronic Nose

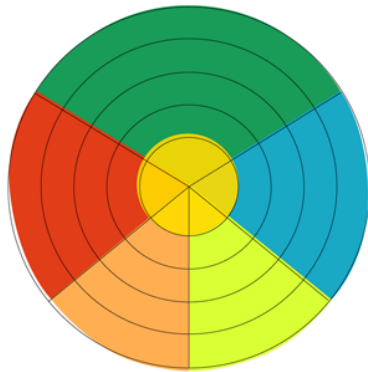
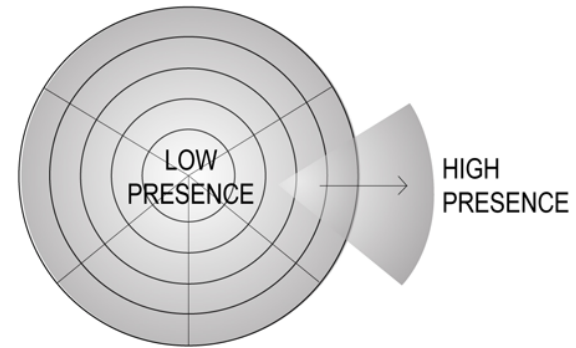


Perfume adverts/
Electronic Tongue
(compound vaporized
via heat/ electrostatic
methods)

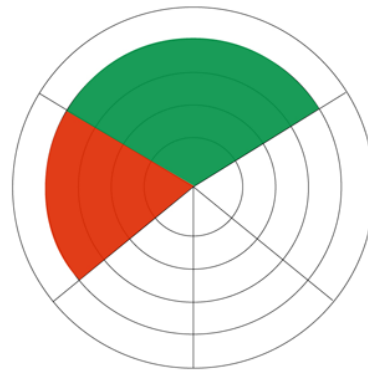


Degree of Presence

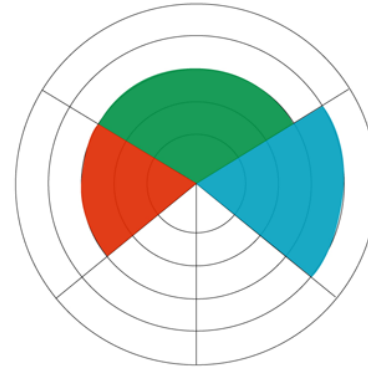
Composition of senses in telepresence



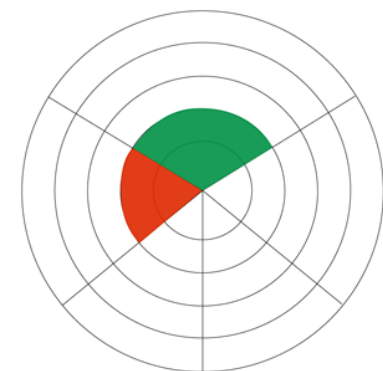
The Matrix



Holographic Teleconference



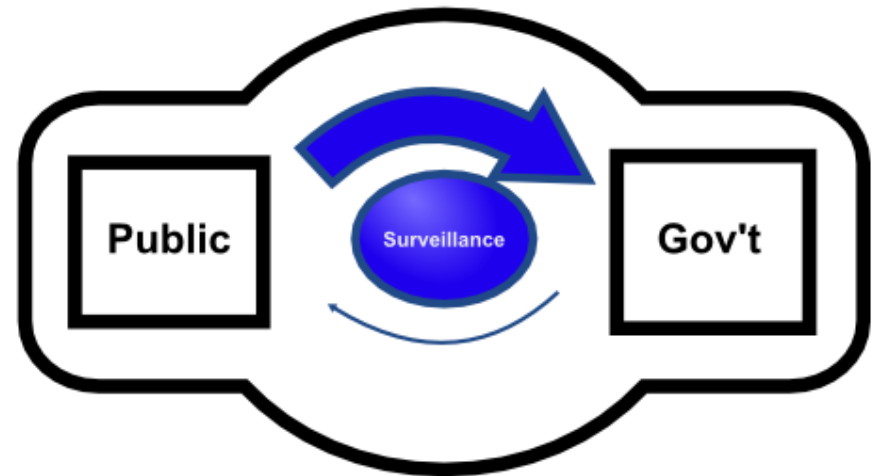
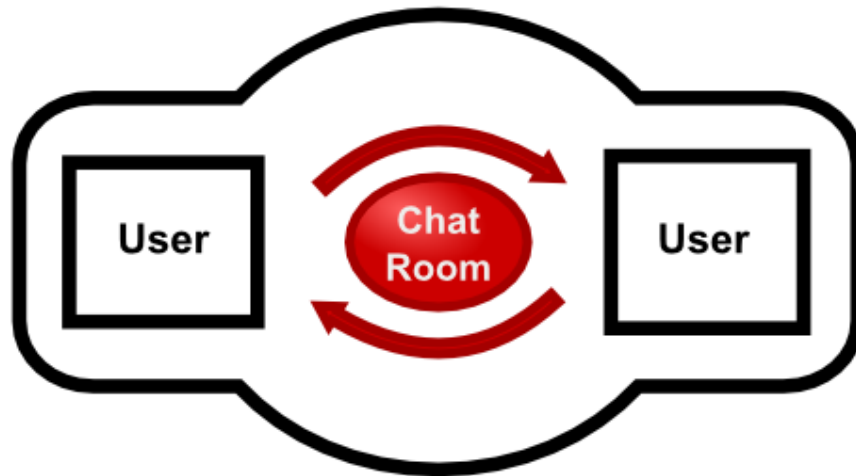
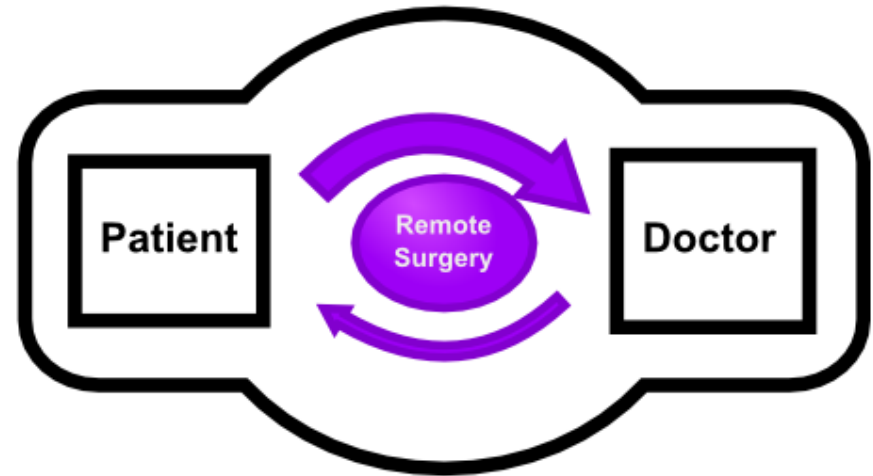
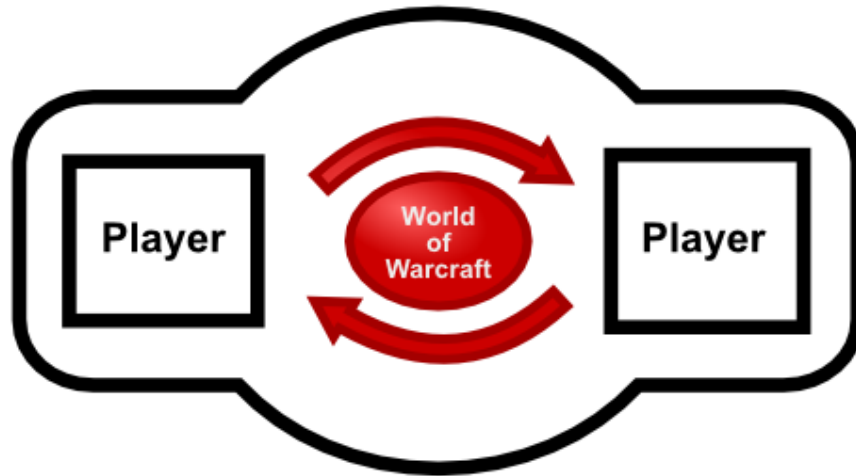
Hug Shirt + Video Chat



Second Life Avatar

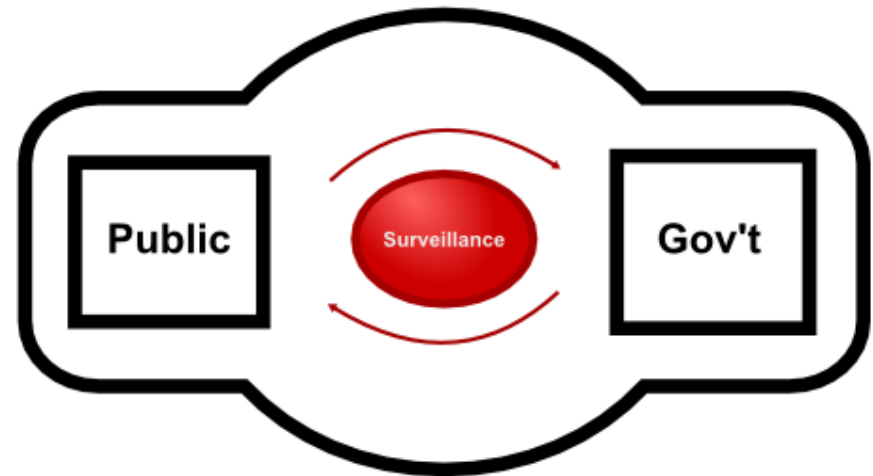
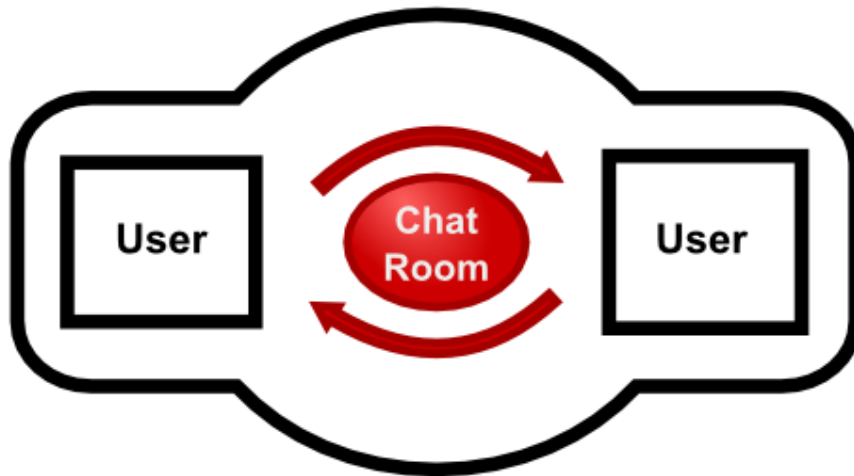
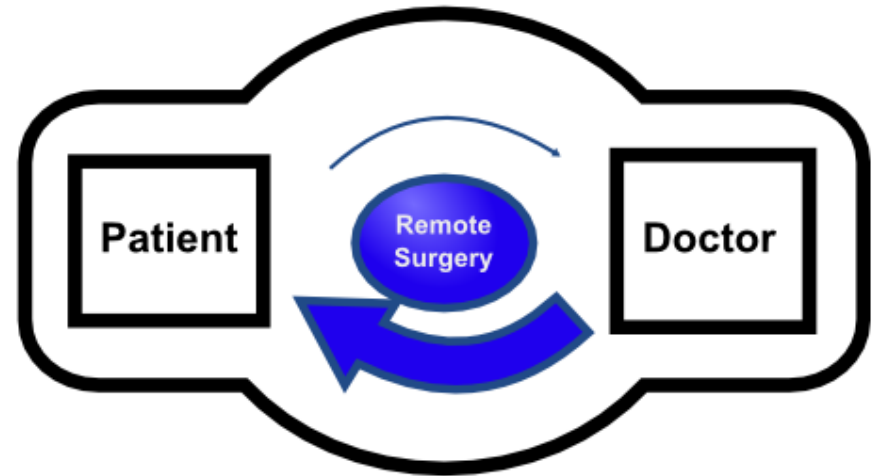
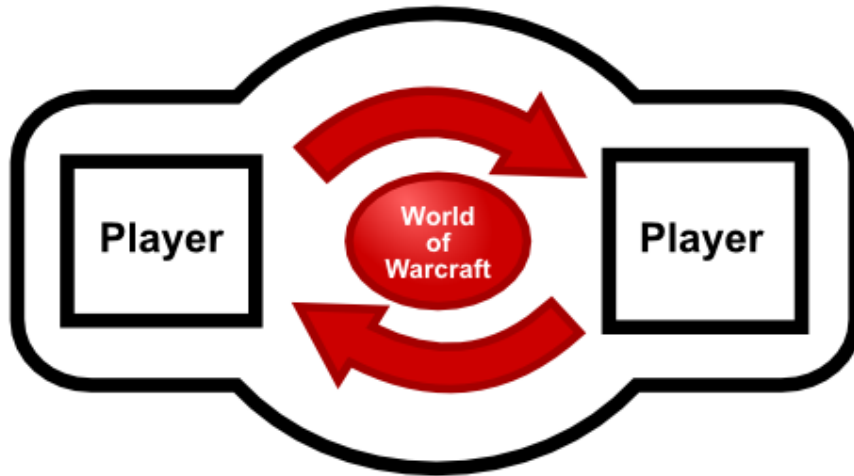
Degree of Symmetry

Flow of Presence in Telepresence



Degree of Symmetry

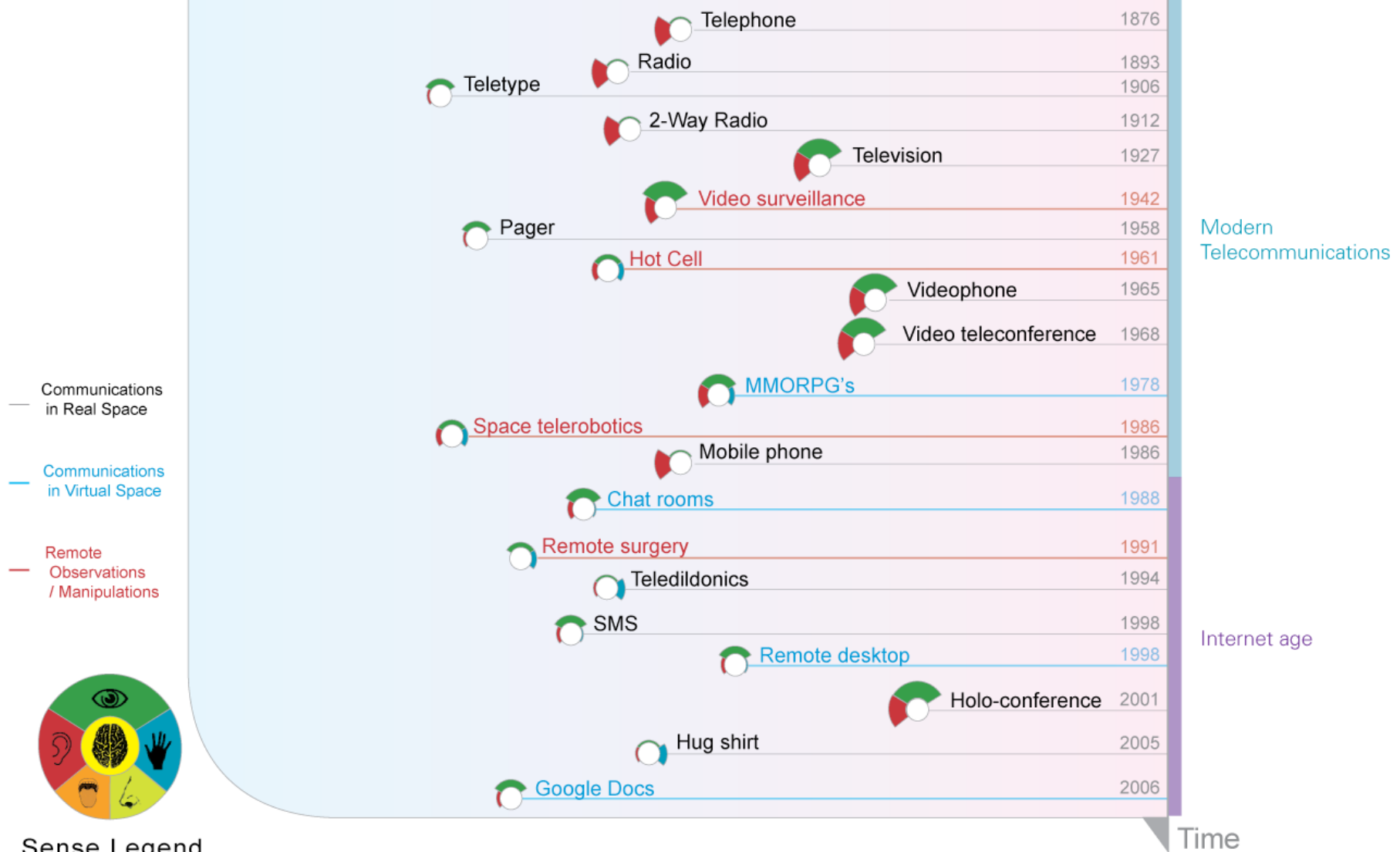
Flow of Control in Telepresence



Timeline: Evolving forms of Telepresence

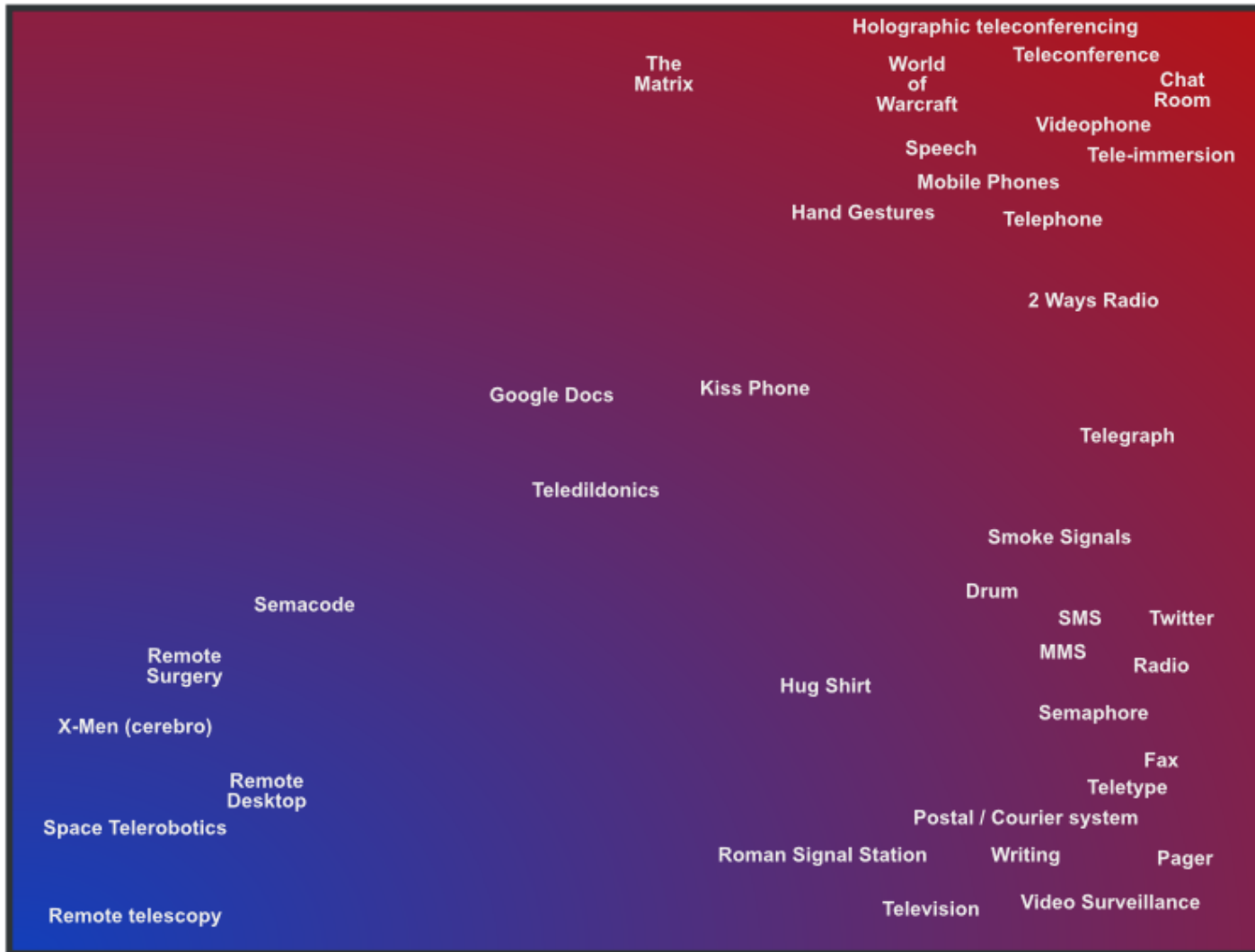
Abstract

Direct





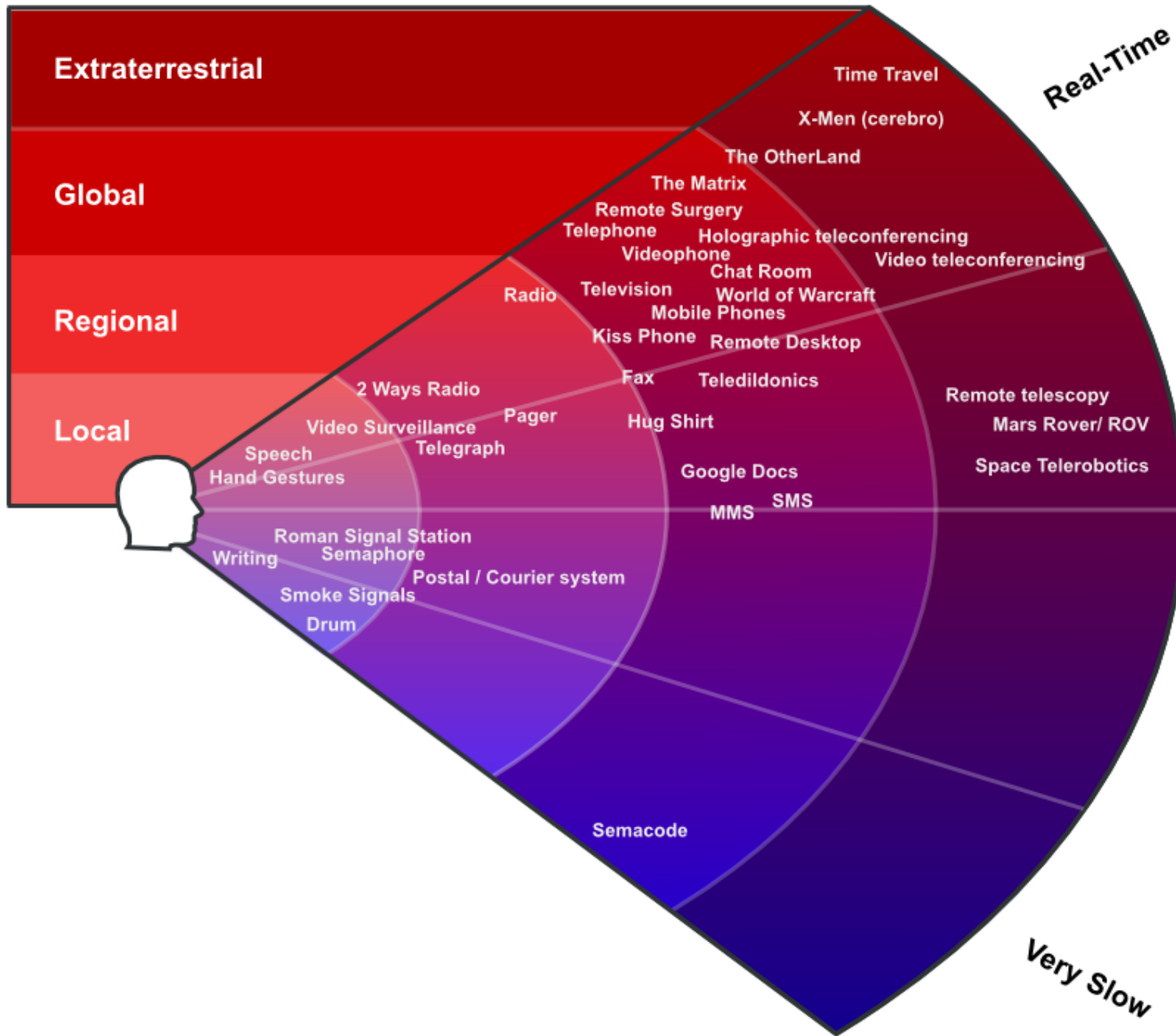
Symmetry of Presence



Symmetry of Control



RANGE

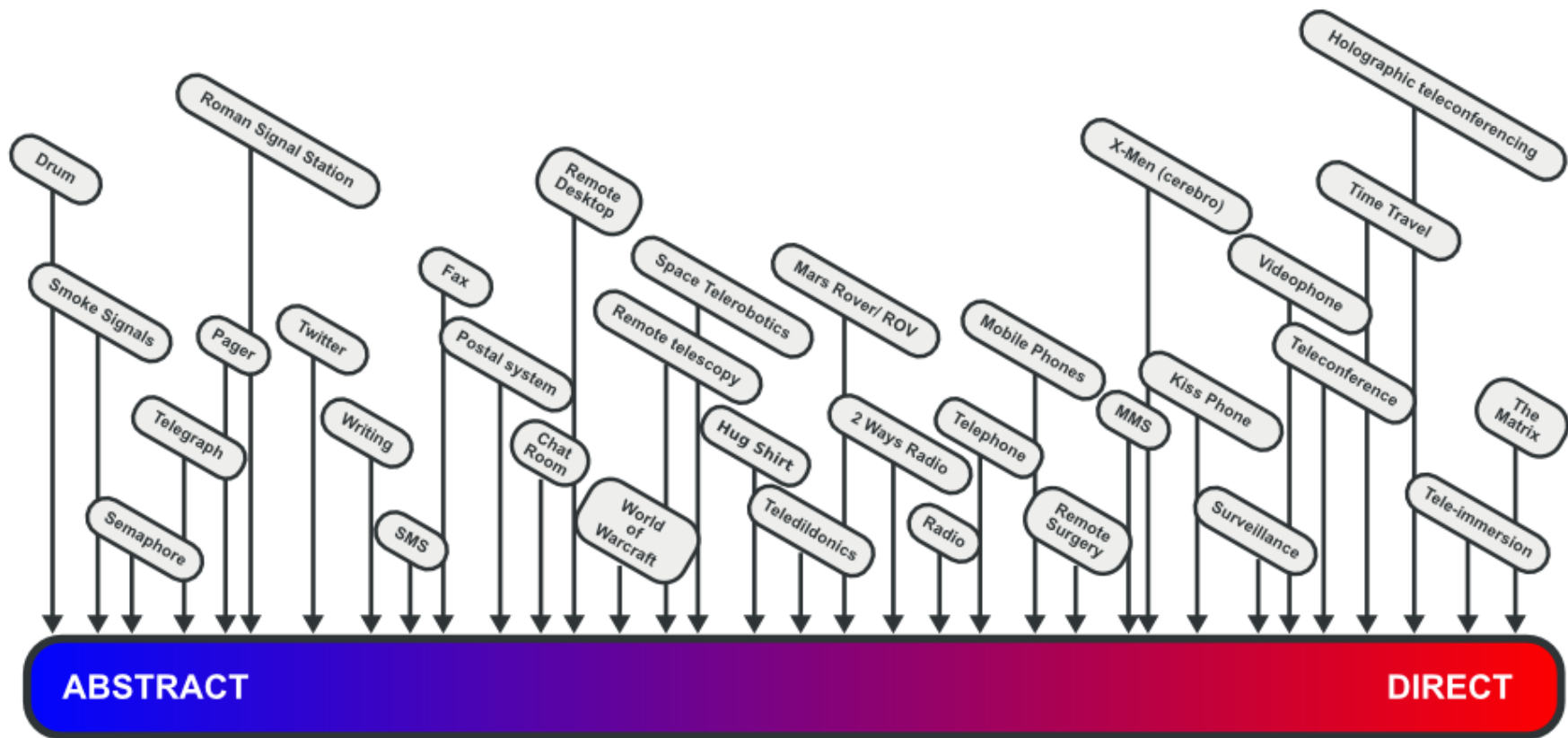


LATENCY

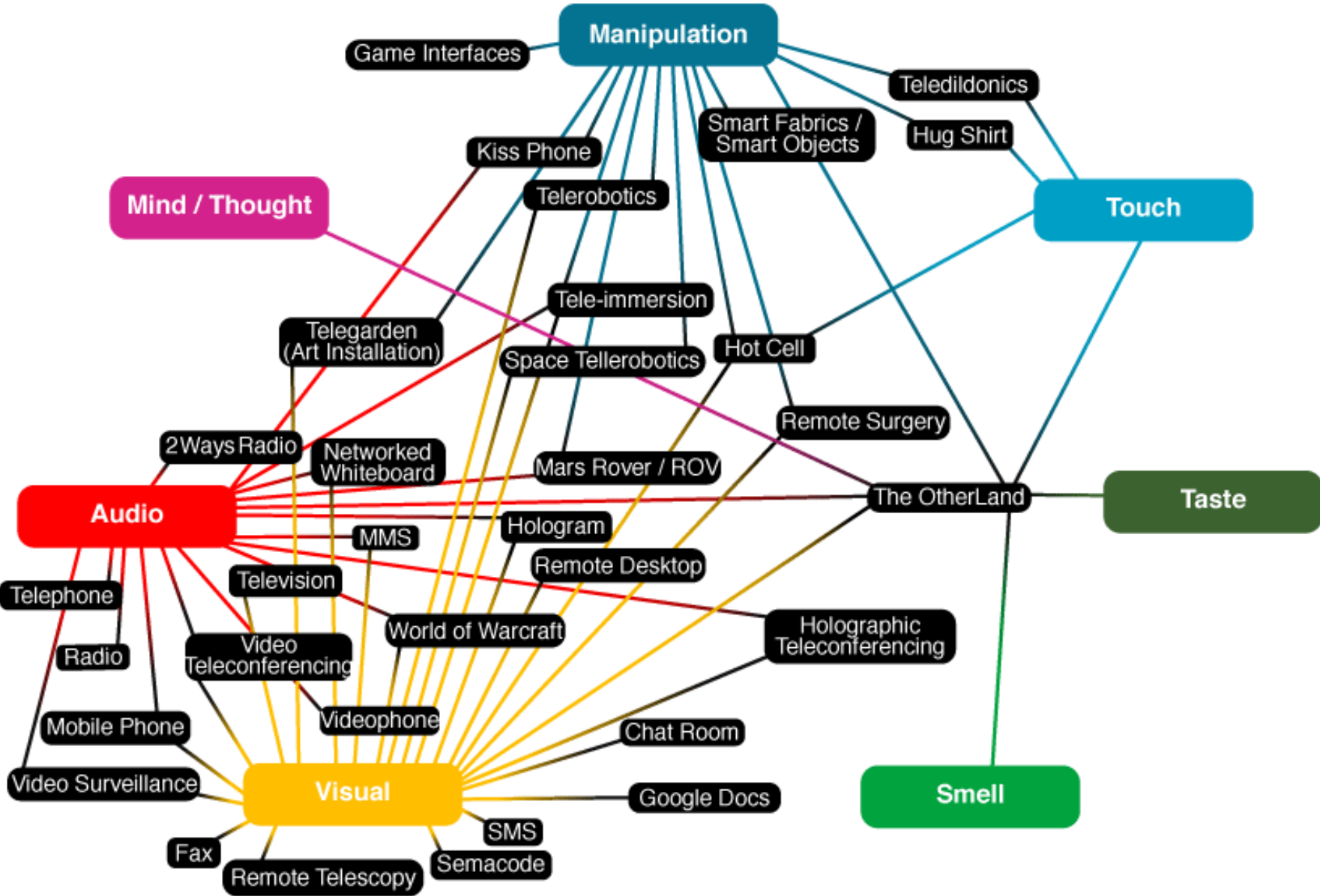
Very Slow

Real-Time

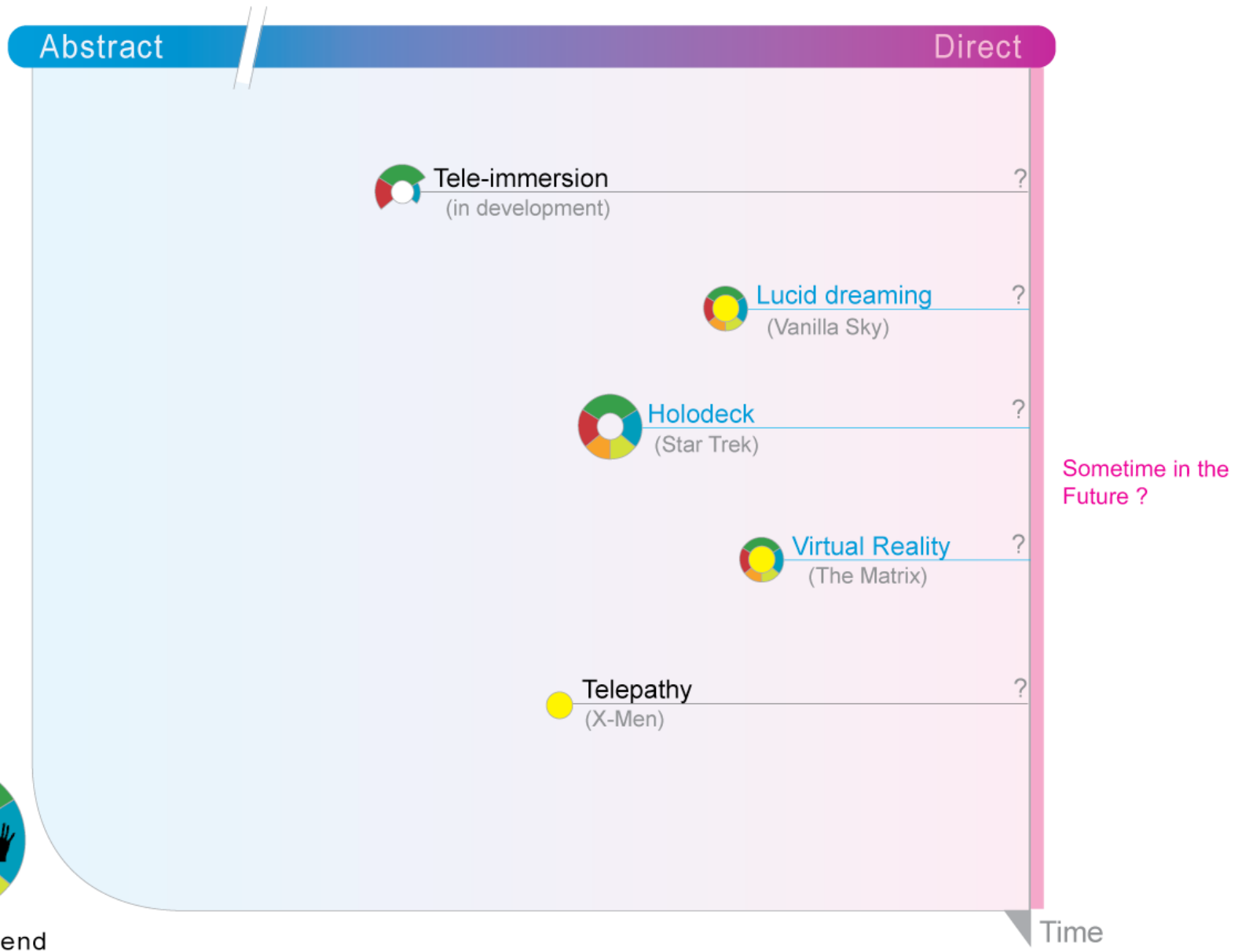
Abstraction of Presence



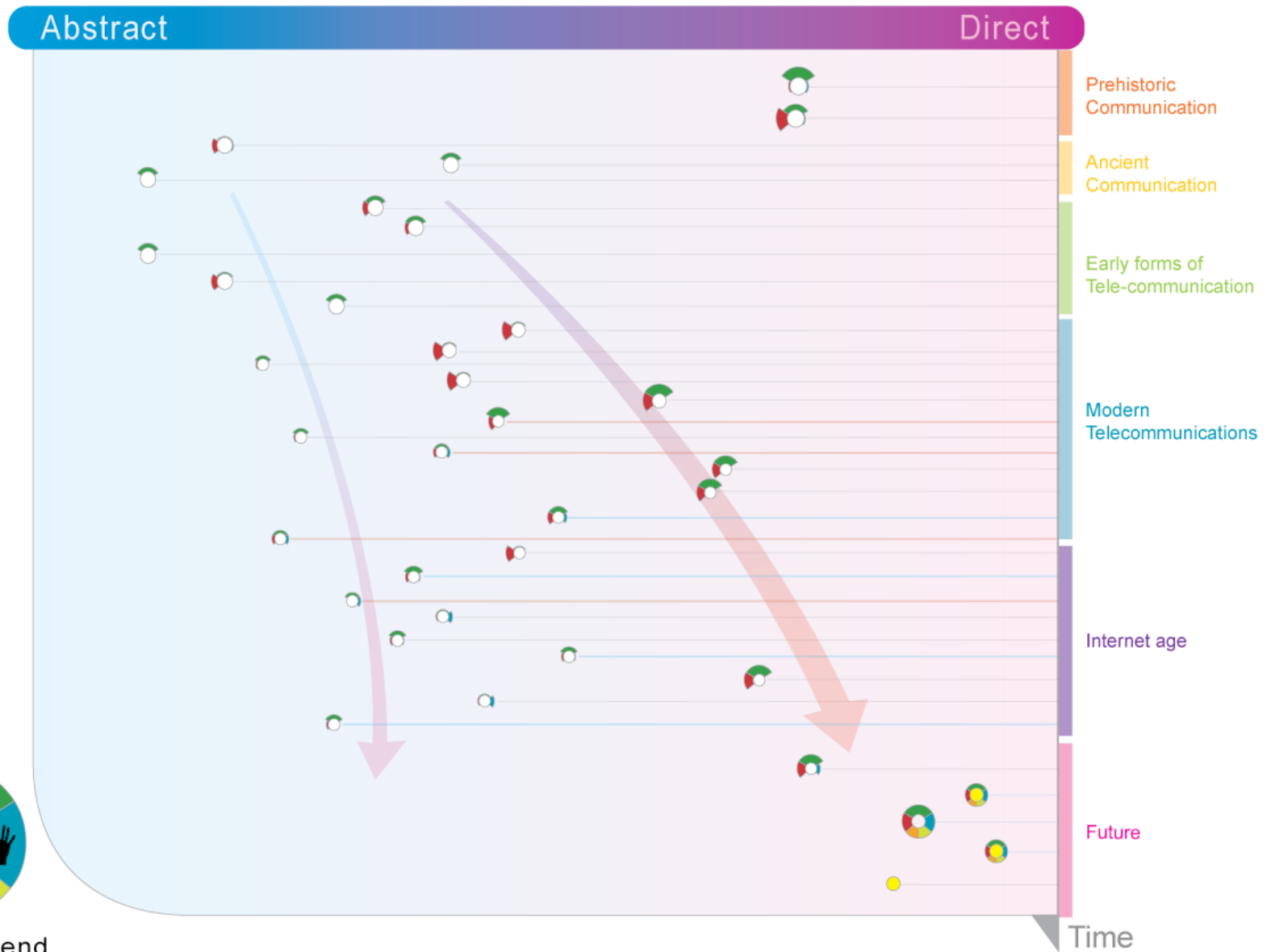
Sense Comparison



Timeline: Imagining the Future

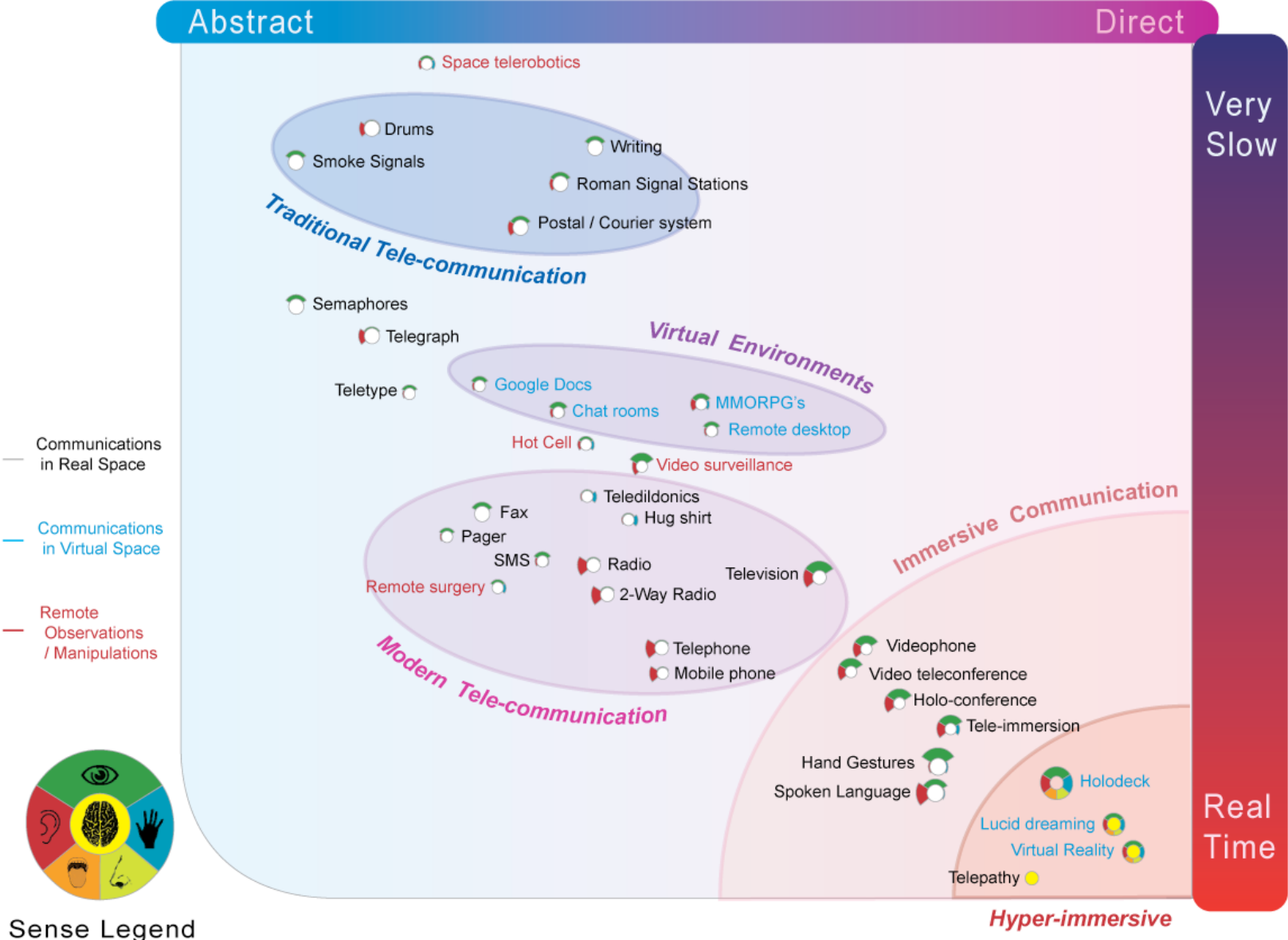


Timeline: Historical Perspective



Sense Legend

Abstraction vs. Latency

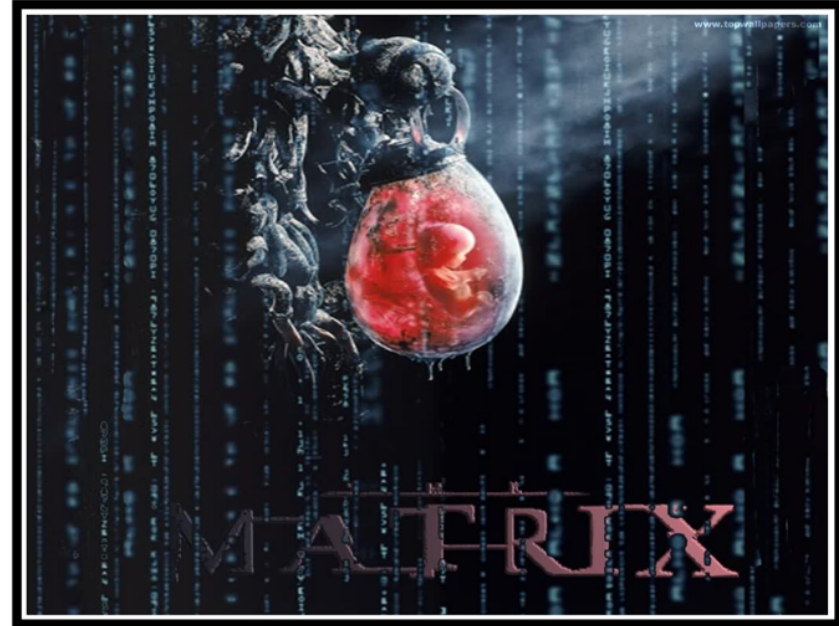


After-thought...



The telepresence utopia

Medical telepresence systems enable surgery from remote locations to minimize incisions or damage to the body. The technology is also beneficial if a doctor is unavailable. Permitting the students to watch operations live, its an indispensable educational tool.



The telepresence dystopia

Hollywood blockbuster 'The Matrix', envisions a world where humans are unsuspecting victims of a technological take-over. Extreme dependence on telepresence systems may make us similarly 'plugged' to gadgets, while insentient robots roam free on our behalf.

References

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