Space-Time Aesthetics in the Meta-Environment: A Case for Knowledge Art?

XARTS 2013

Claudia Jacques
MFA, Computer Art, School of Visual Arts, NY, USA
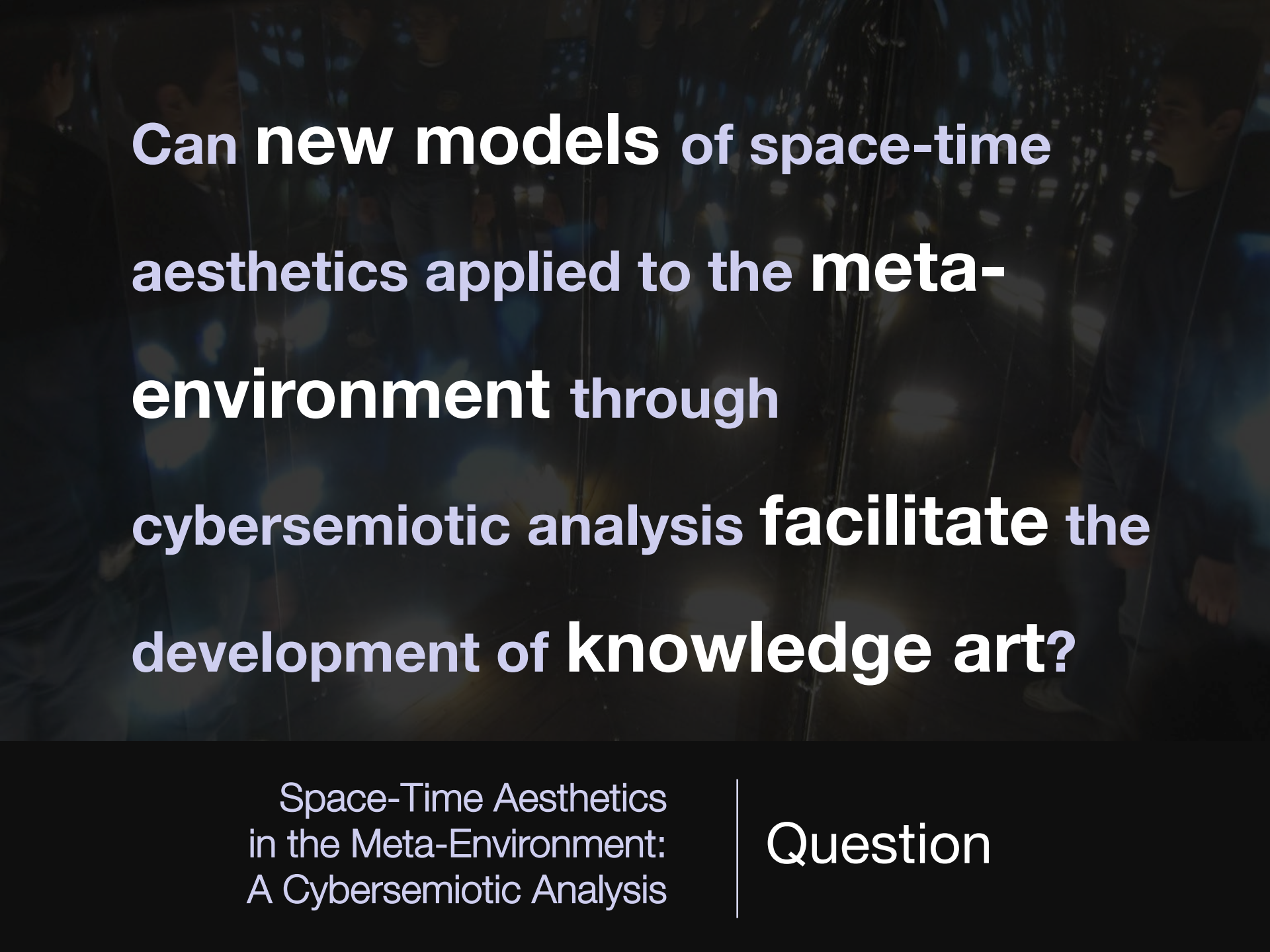Ph.D. candidate Planetary Collegium, University of Plymouth, UK
SUNY Westchester Community College, Valhalla, NY, USA

'Technoetics is a convergent field of practice that seeks to explore consciousness and connectivity through digital, telematic, chemical or spiritual means, embracing both interactive and psychoactive technologies, and the creative use of moistmedia.'

Roy Ascott, 2008

Artist Designer Educator Researcher | Technoetic Artist

no•et•ic:
wisdom, direct knowing, or subjective understanding
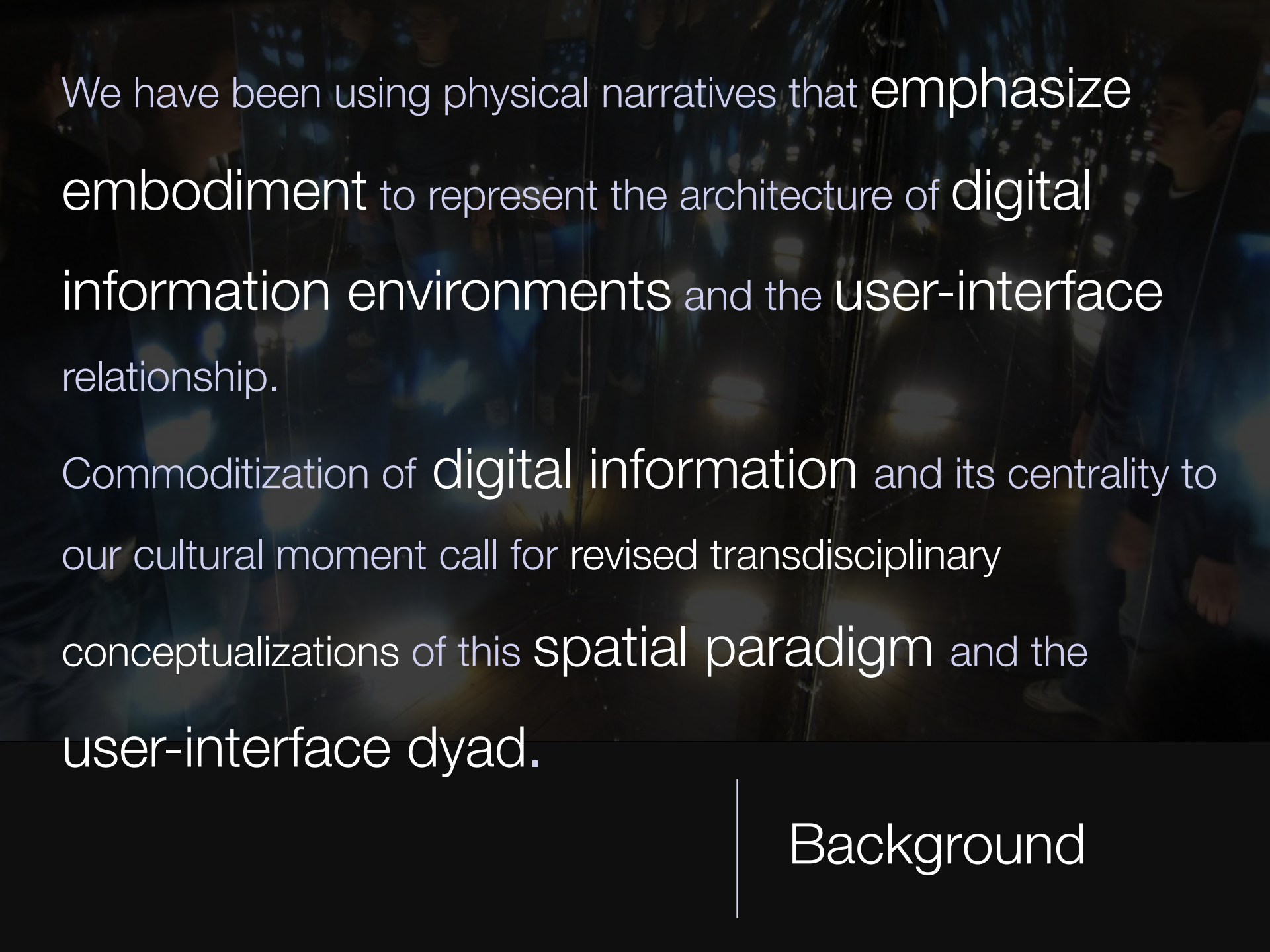IONS/Institute of Noetic Sciences

Can **new models** of space-time aesthetics applied to the **meta-environment** through cybersemiotic analysis **facilitate** the development of **knowledge art?**

We have been using physical narratives that emphasize embodiment to represent the architecture of digital information environments and the user-interface relationship.

Commoditization of digital information and its centrality to our cultural moment call for revised transdisciplinary conceptualizations of this spatial paradigm and the user-interface dyad.

Background

"The railroad did not introduce movement or transportation or wheel or road into human society, but it accelerated and enlarged the scale of previous human functions"

Marshall McLuhan, 1964

The Past   The Present   The Future

Linear Time

Space-Time perception
Einstein Theory of Relativity
Expanded episodic memory
Linear interval visualization

Mechanical Age

Structural and linear events
Access to many events/information
Not information centered
User centered

Mechanical Age Influences on the Digital Age

Digital Age

"During the mechanical ages we had extended our bodies in space. Today, after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned."

Marshall McLuhan, 1964

. . . transforming our perceptions of . . . | Digital Age

Meta-Environment: User, Information and Interface relationship as a complex adaptive system

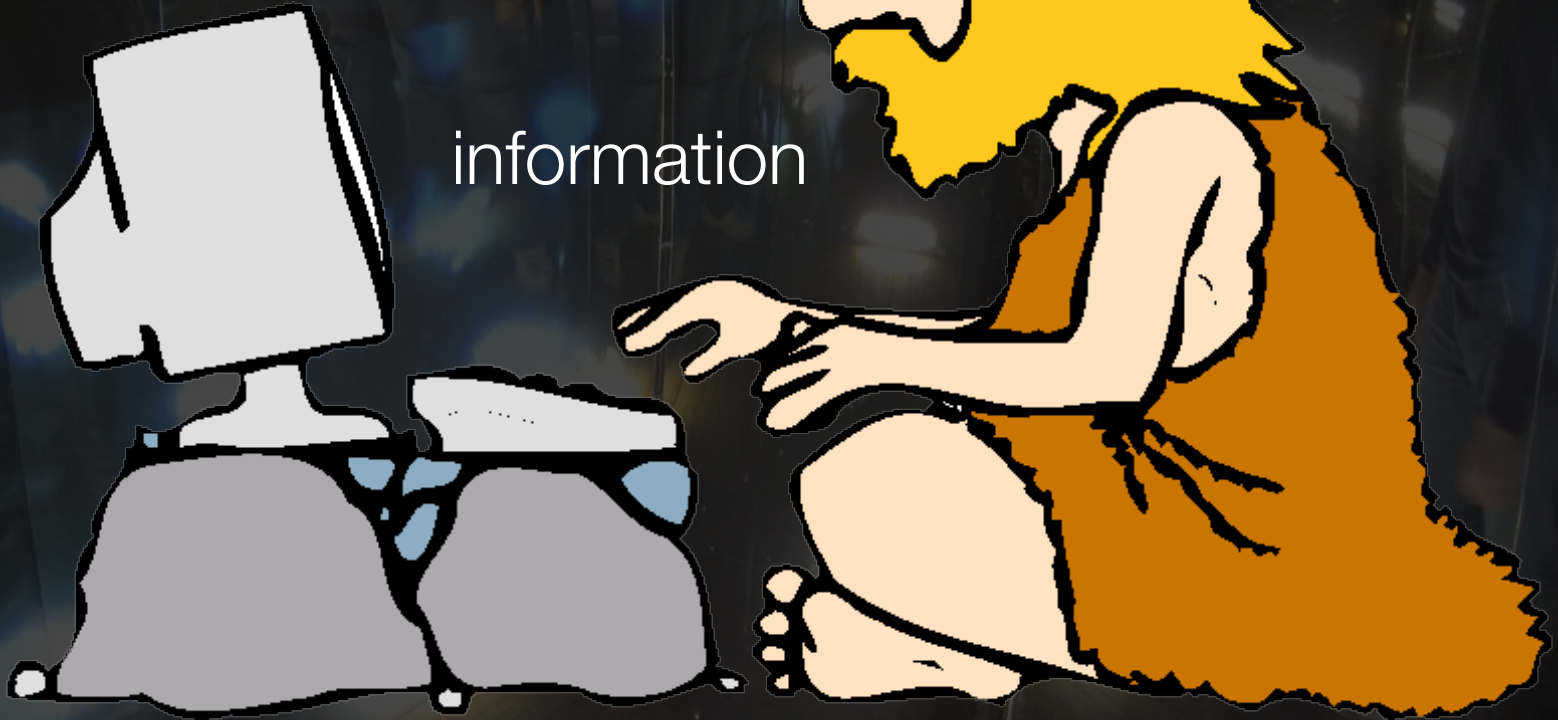**Space-Time Aesthetics**: Representations and models to feed analysis

Cybersemiotics: Transdisciplinary framework of analysis

Premises

interface

information

user

Meta-Environment

Human element

"One that uses" something : • information
• interface

user

Entropic transmission of data and metadata in binary format that generates communication as a whole.

Metadata is not only the description of the content but also the description of the structure of the content.

information

Weiner, 1948, 1965, p61
Shannon & Weaver, 1959, p100

'Interface is described in physics as a **"surface separating two phases of matter."'**

Encyclopaedia Britannica

physical machine, hardware computer, cell phone, tablet, etc. **+** **software, applications and processes** utilized by these machines

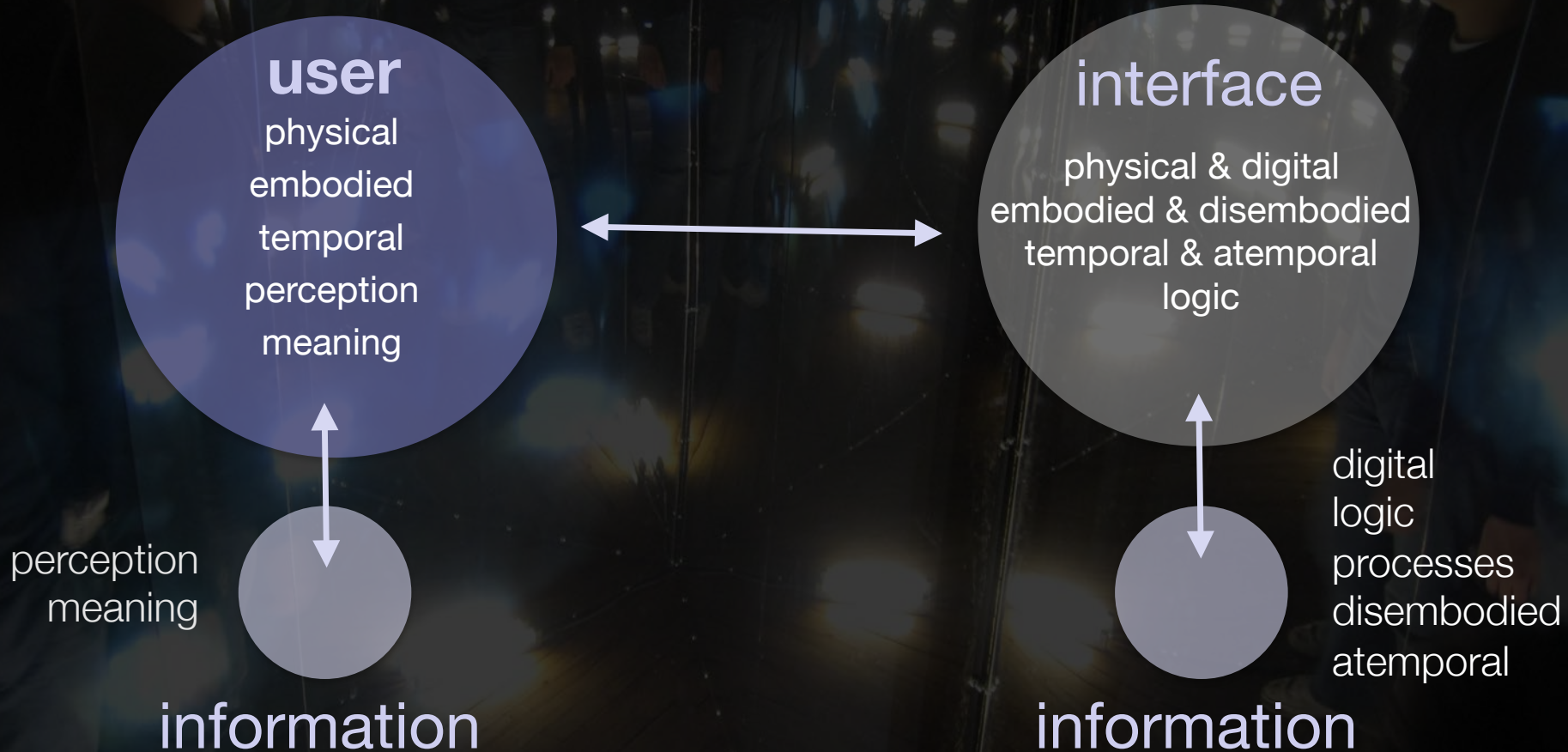Medium – hardware+software – that facilitates the interaction between humans and information.

interface

HUMAN PERCEPTION
semiotics

COMPUTER INTERFACE PROCESS
cybernetics, information design, digital media

user
physical
embodied
temporal
perception
meaning

interface
physical & digital
embodied & disembodied
temporal & atemporal
logic

perception
meaning

digital
logic
processes
disembodied
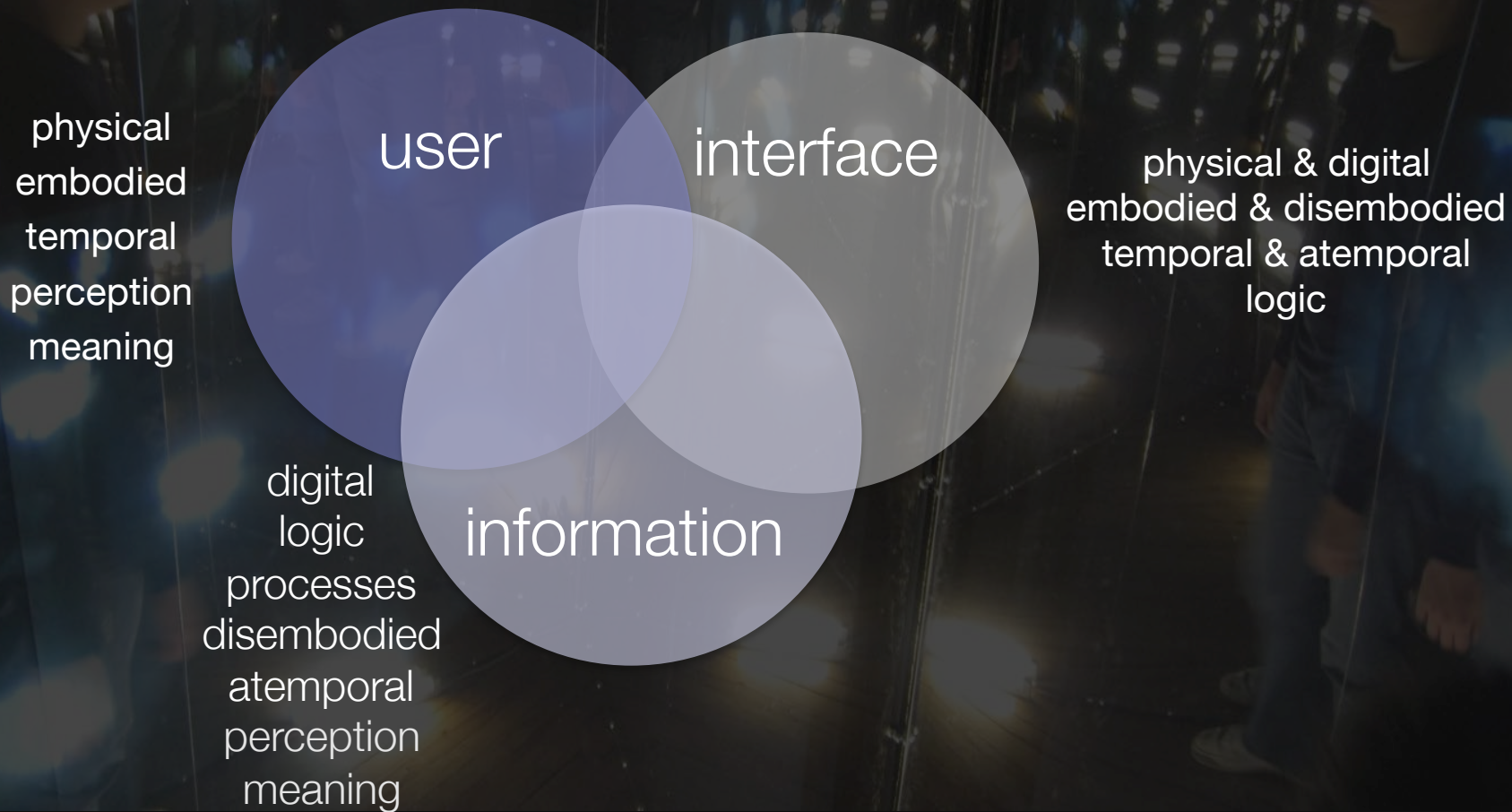atemporal

information

information

Perception x Process

Cybersemiotics

"Cybersemiotics is a transdisciplinary theory of Information, Cognition, Meaning, Communication and Consciousness that integrates Cybernetics and Peircean Semiotic paradigms in a common framework."

Søren Brier

Cybersemiotic Framework

physical
embodied
temporal
perception
meaning

user

interface

physical & digital
embodied & disembodied
temporal & atemporal
logic

digital
logic
processes
disembodied
atemporal
perception
meaning

information

"Information and meaning, logic and emotion
have to be united in new creative ways." Brier

Meta-Environment

USER	INFORMATION	INTERFACE
Physical	Digital	Digital + Physical
Atoms	Bits	Atoms + Bits
Embodied	Disembodied	Embodied+Disembodied
Temporal	Atemporal	Temporal + Atemporal
Linear + Nonlinear Dynamics	Nonlinear Dynamics	Linear Dynamics
Subjective	Objective + Subjective	Objective

2001 - Infinite Memory and Bandwidth: Implications for Artificial Intelligent - Raj Reddy

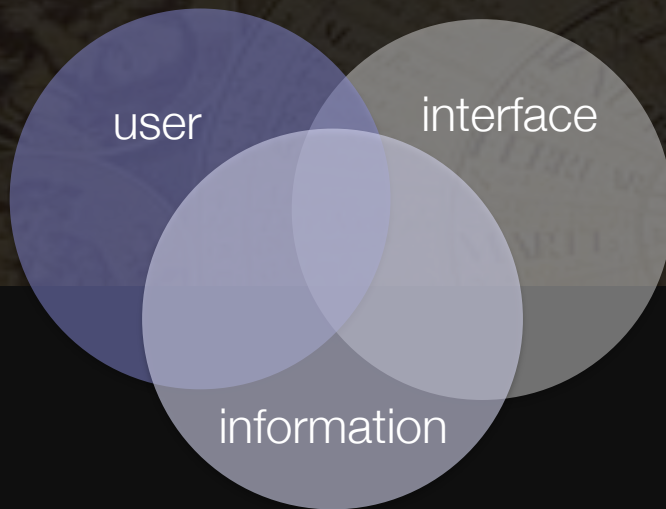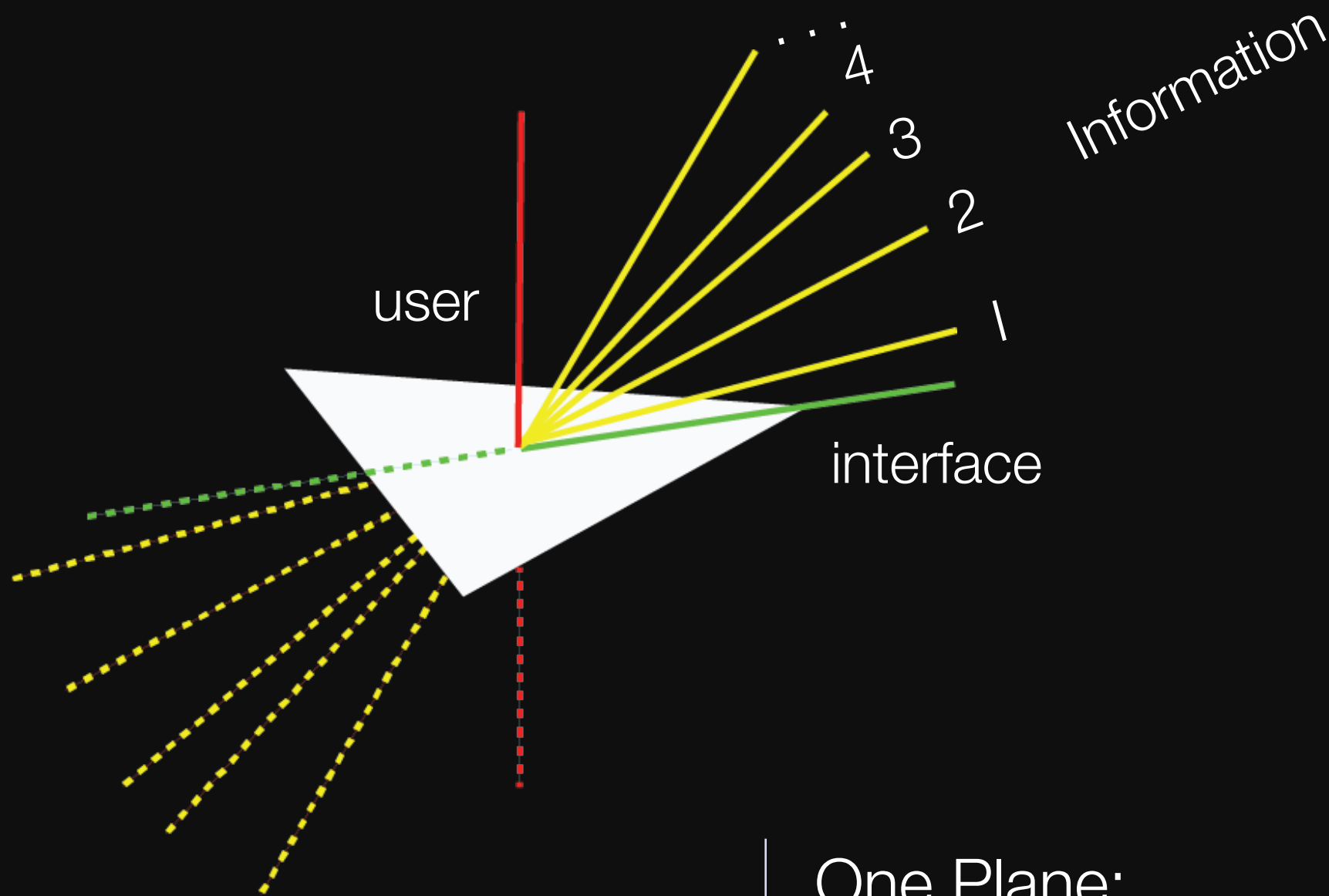2012 – The Soar Cognitive Architecture – John Laird

Properties

Meta-Environment Current Relations

One Plane:
- User Centric
- Information Centric
- Interface Centric

user

interface

information

Initial Findings

user

Information

4

3

2

1

interface

One Plane:
User Centric

interface

user

Information 1

Information 2

Information 3

Information 4
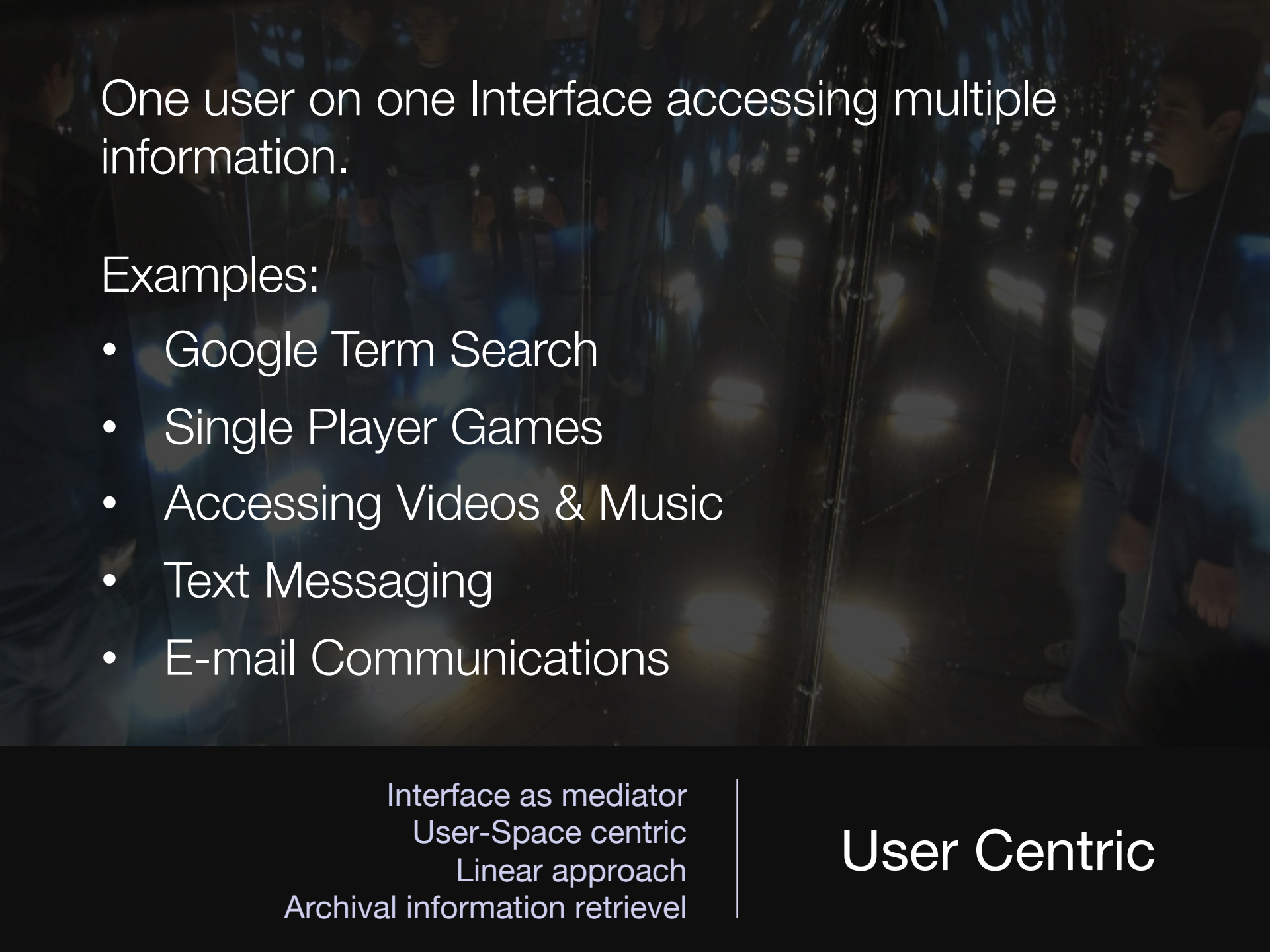
Information 5

Information 6

Information 7

Information 8

Information ...

Interface as mediator
Space centric
Linear approach
Archival information retrievel
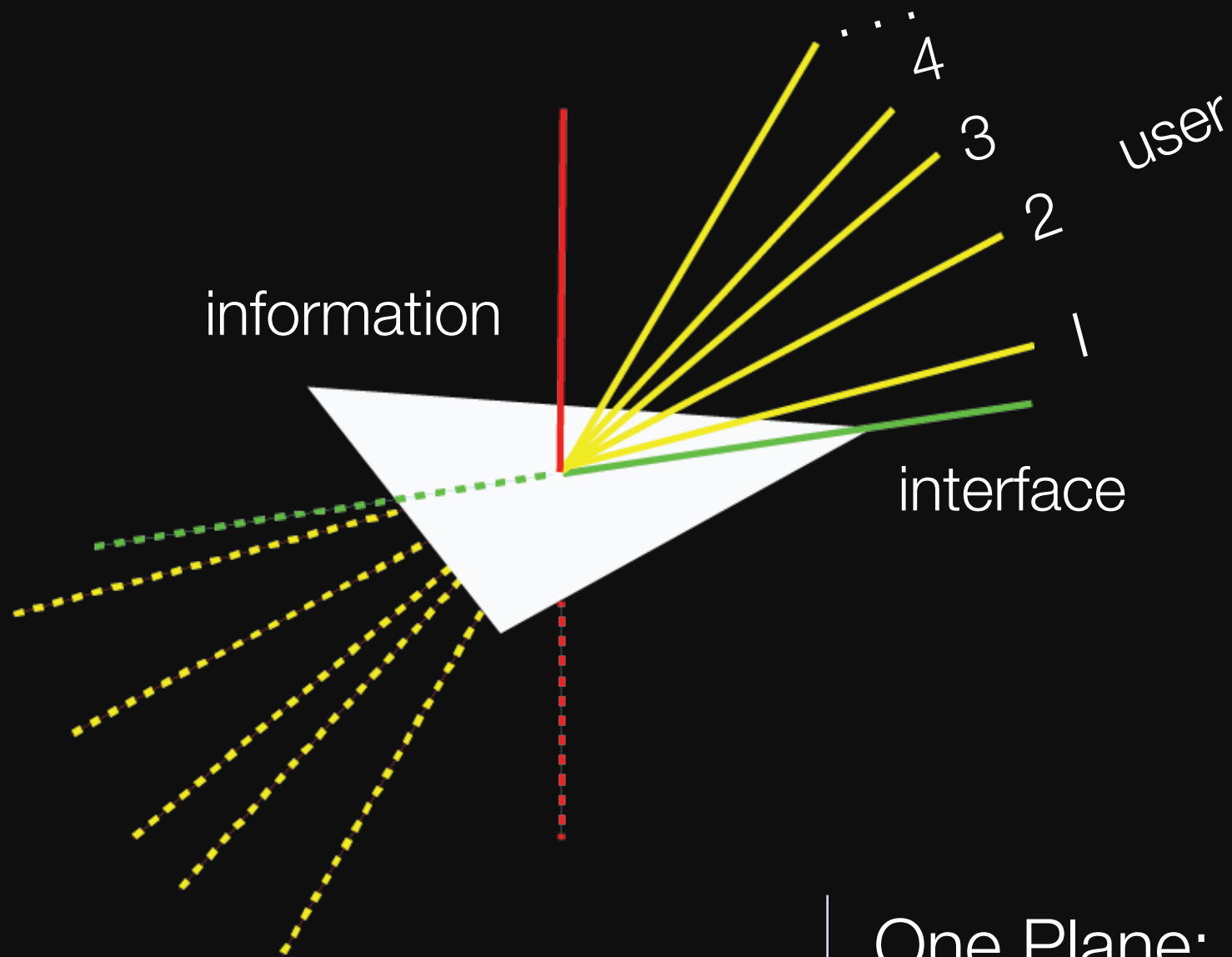
User Centric

One user on one Interface accessing multiple information.

Examples:

- Google Term Search

- Single Player Games

- Accessing Videos & Music

- Text Messaging

- E-mail Communications

Interface as mediator
User-Space centric
Linear approach
Archival information retrievel

User Centric

information

user

4

3

2

1

interface

One Plane:
Information Centric

interface

Information

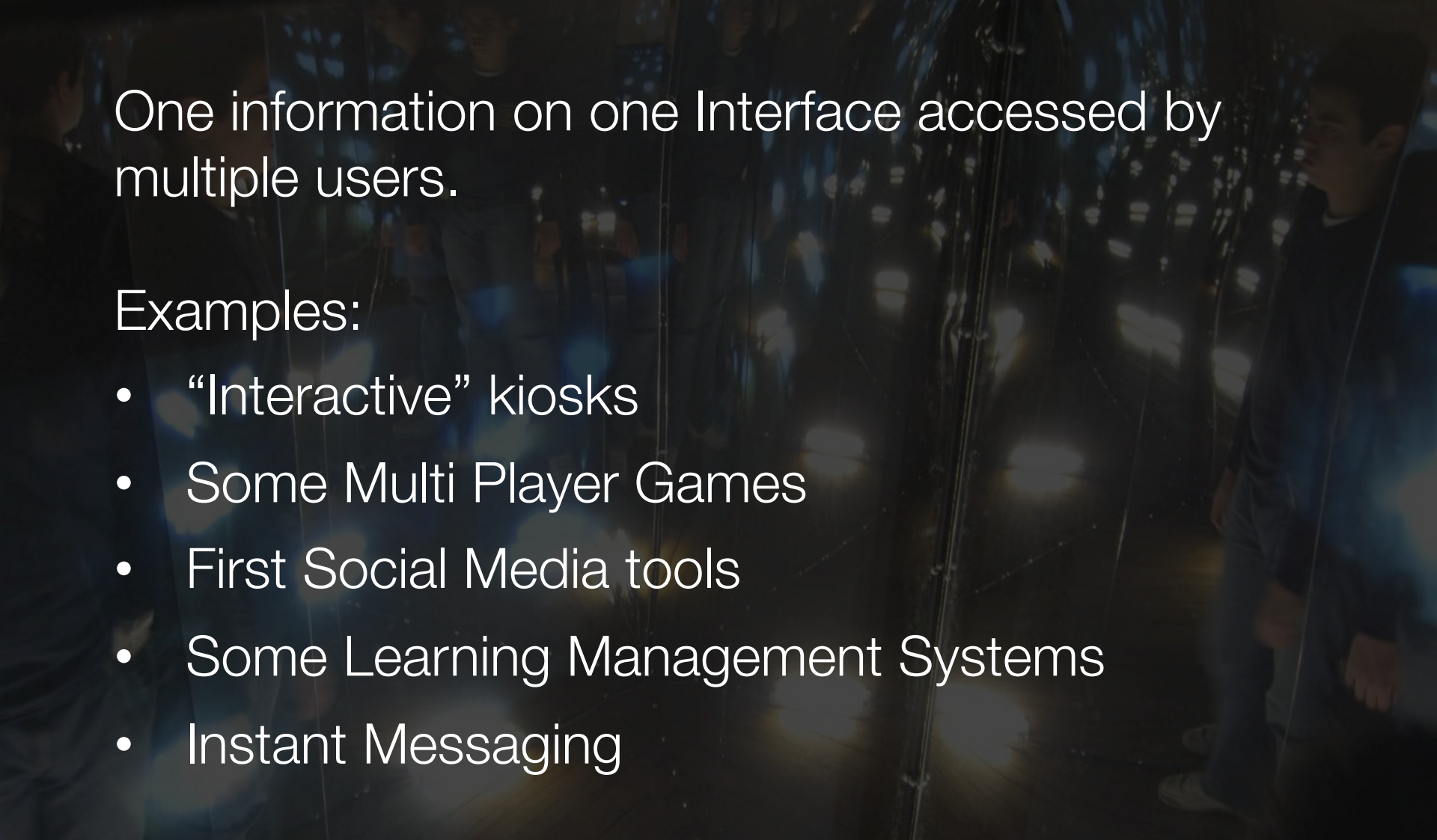User 1 User 2 User 3 User 4 User 5 User 6 User 7 User 8 User :

Interface as mediator
Event/information centric
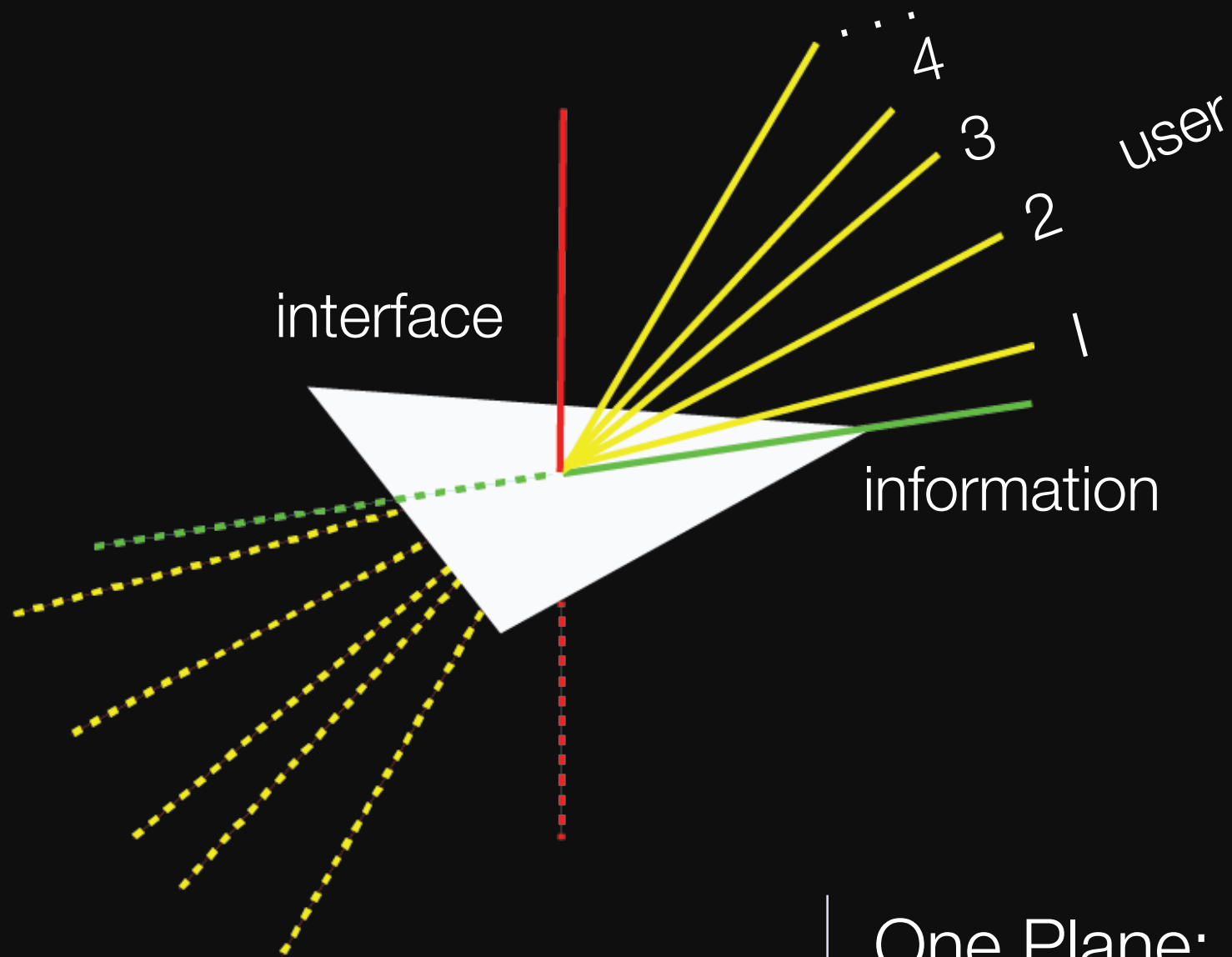Linear approach

Information
Centric

One information on one Interface accessed by multiple users.

Examples:

- "Interactive" kiosks

- Some Multi Player Games

- First Social Media tools

- Some Learning Management Systems

- Instant Messaging

Information
Centric

interface

user

information

4
3
2
1

. . .

One Plane:
Interface Centric

Information

Interface | | | | | | | | | |

User 1 User 2 User 3 User 4 User 5 User 6 User 7 User 8 User :

Information as mediator
Event/information centric
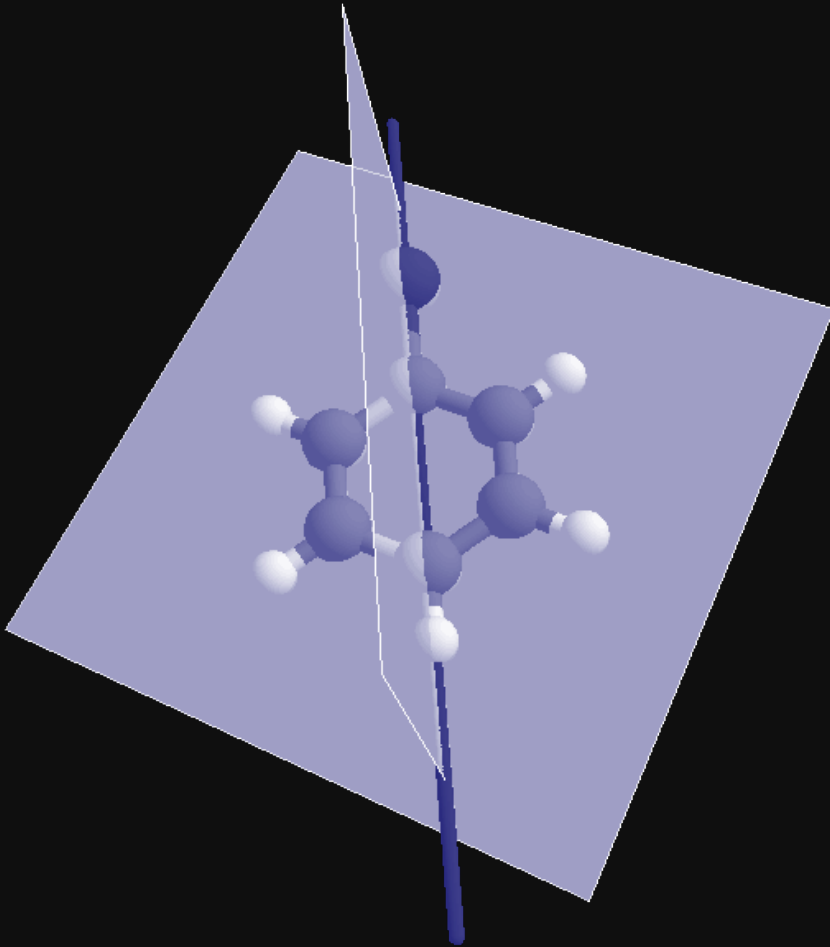Linear approach

Interface Centric

One dedicated information interface accessed by multiple users.

Examples:

- Some Dedicated environments

- Some Multi Player Games

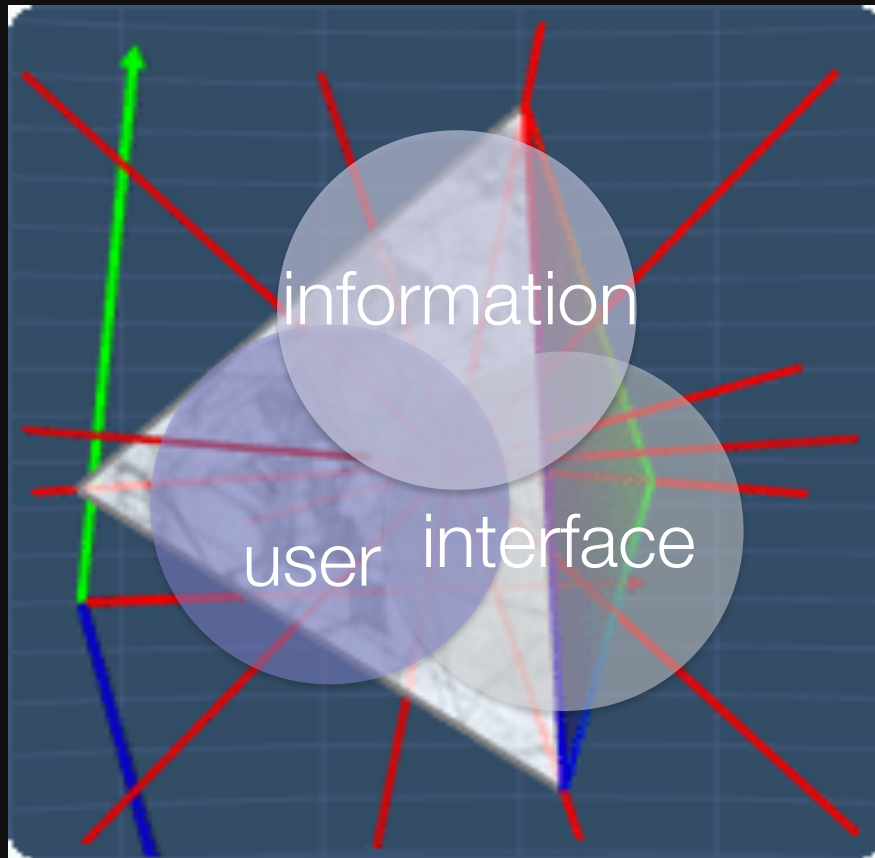- Some Social Media tools

- Mobile applications

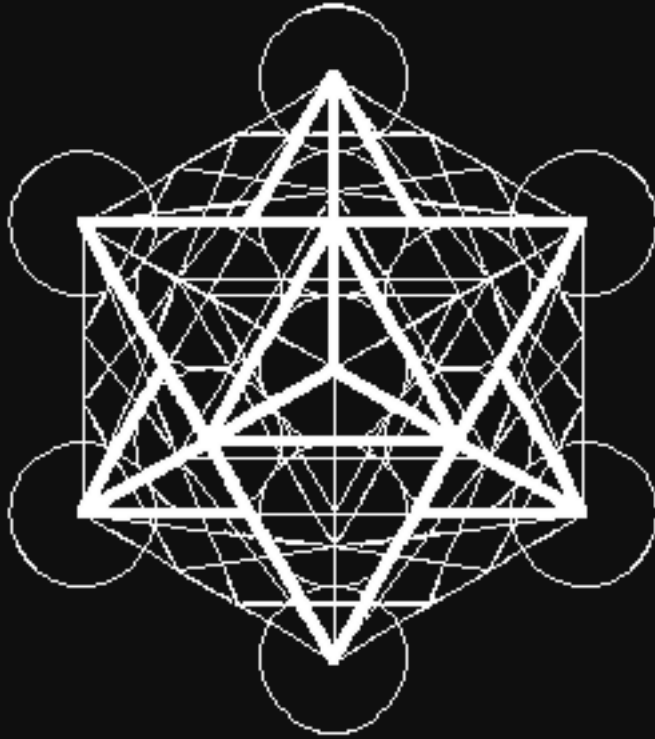Archival information retrievel
Static information

Interface Centric

- Non-user centric
- Non-information centric
- Non-interface centric

Two Planes

Several Planes

Integration
Polyhedron

Knowledge Art ?

Past:

1. Data: symbols
2. Information: data that are processed to be useful; provides answers to "who", "what", "where", and "when" questions
3. Knowledge: application of data and information; answers "how" questions
4. Understanding: appreciation of "why"

Future:

5. Wisdom: evaluated understanding

Archival Knowldege

Structural Knowldege

Knowldege Art

Knowledge Art

Cybersemiotics

user   interface

Knowledge Art

information
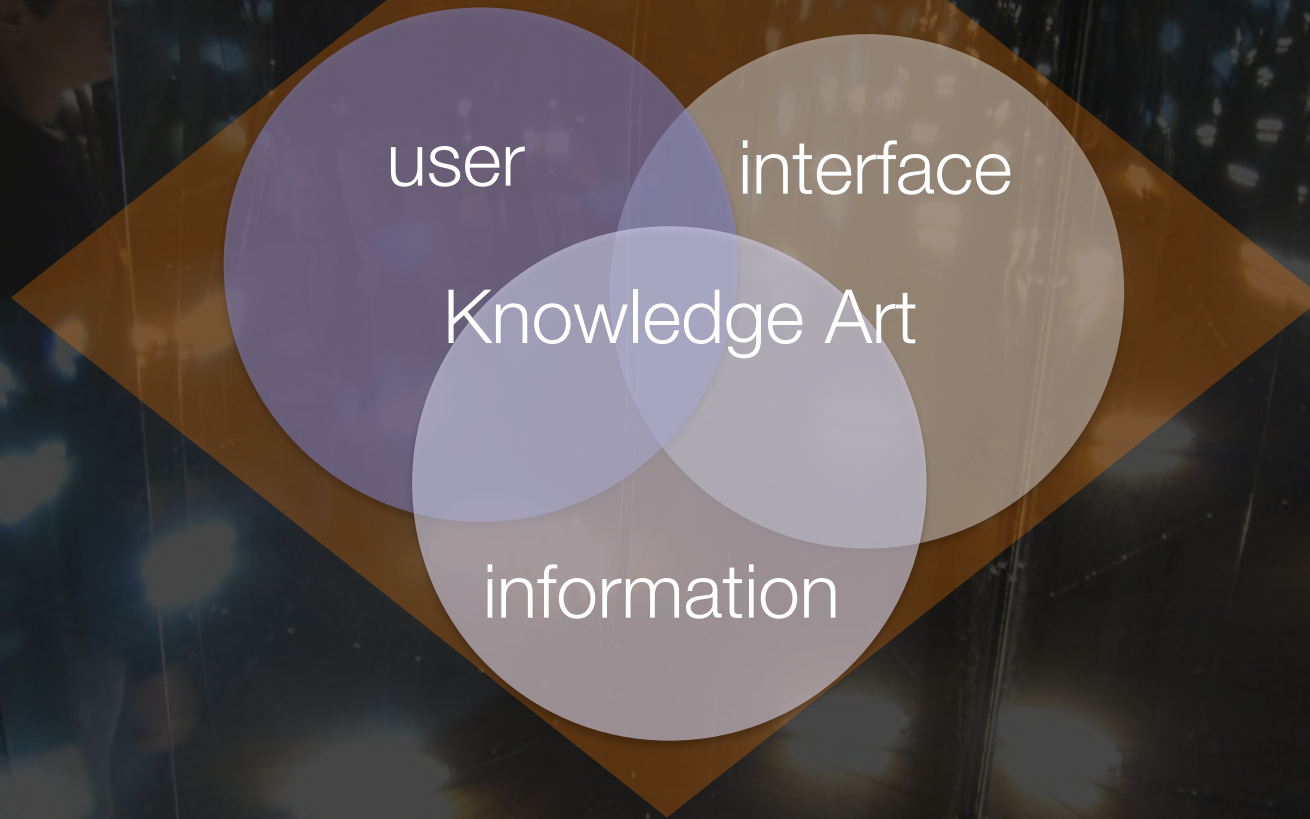
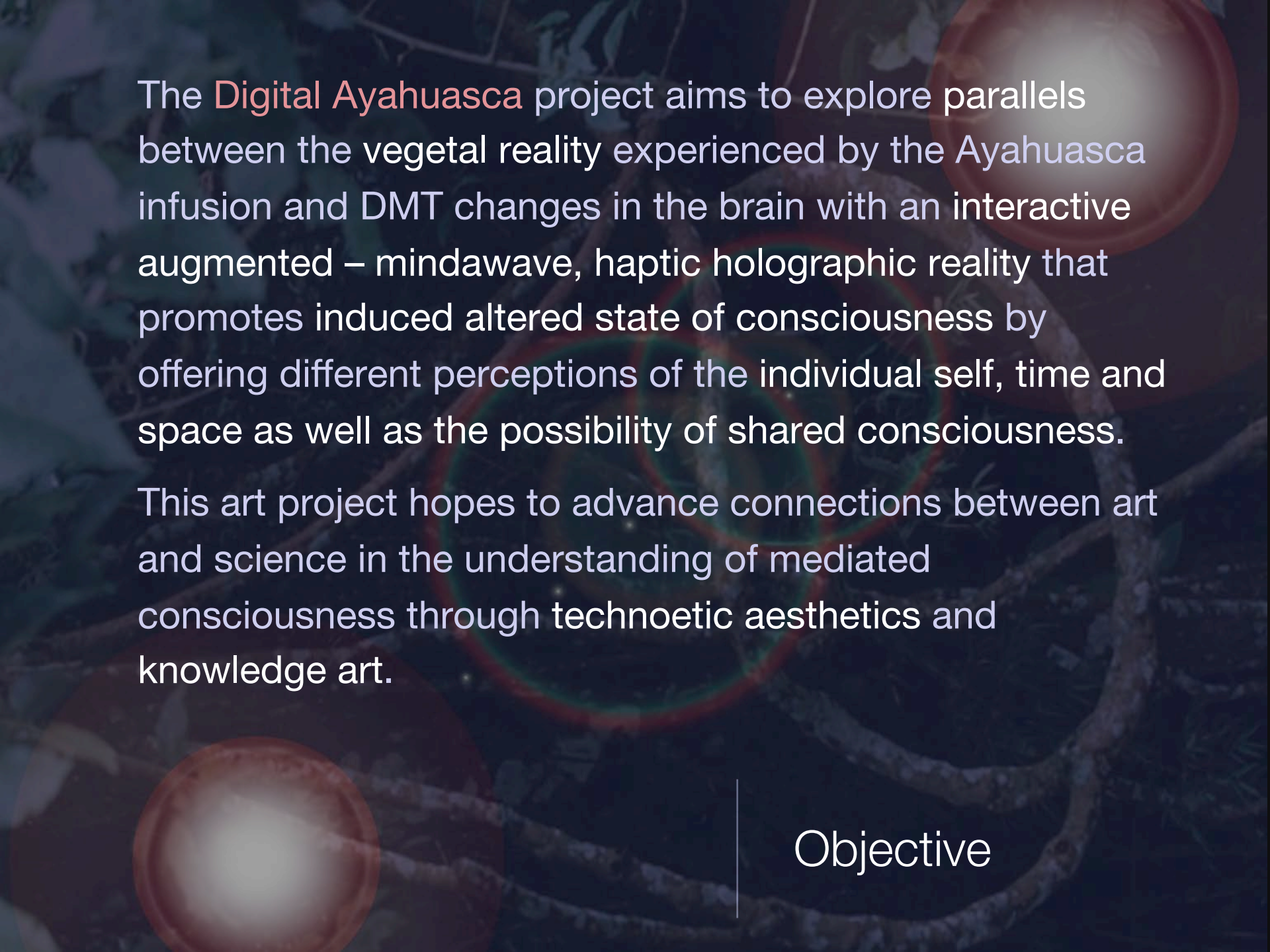Generative
Dynamic
Complex Adaptive System | **Knowledge Art**

Digital Ayahuasca

Perception of Self, Time, Space & Stream of Consciousness
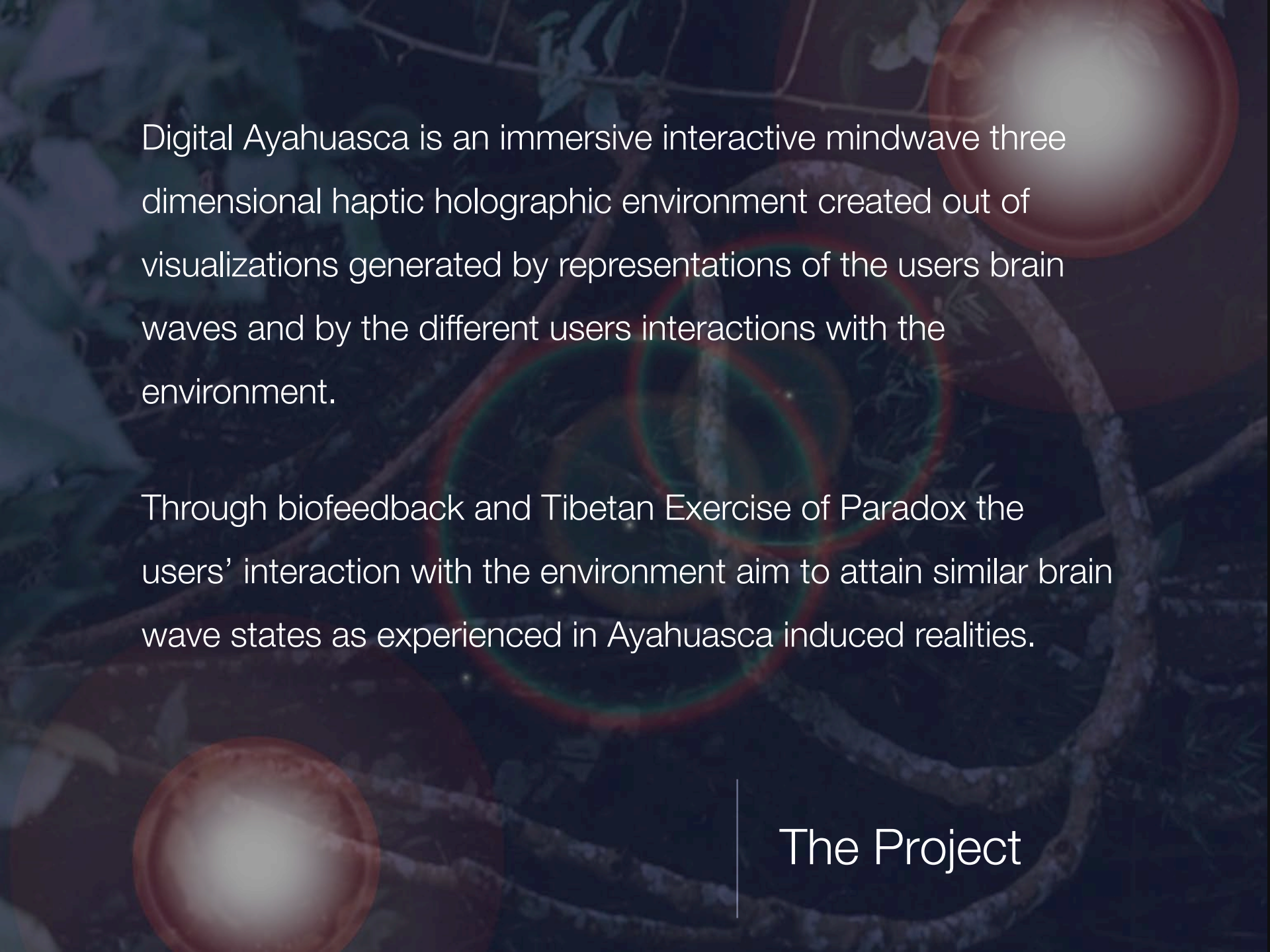Mediated by Mindwave Haptic Holographic Reality

Claudia Jacques
June 2013

The Digital Ayahuasca project aims to explore parallels between the vegetal reality experienced by the Ayahuasca infusion and DMT changes in the brain with an interactive augmented – mindawave, haptic holographic reality that promotes induced altered state of consciousness by offering different perceptions of the individual self, time and space as well as the possibility of shared consciousness.

This art project hopes to advance connections between art and science in the understanding of mediated consciousness through technoetic aesthetics and knowledge art.

Objective

Digital Ayahuasca is an immersive interactive mindwave three dimensional haptic holographic environment created out of visualizations generated by representations of the users brain waves and by the different users interactions with the environment.

Through biofeedback and Tibetan Exercise of Paradox the users' interaction with the environment aim to attain similar brain wave states as experienced in Ayahuasca induced realities.

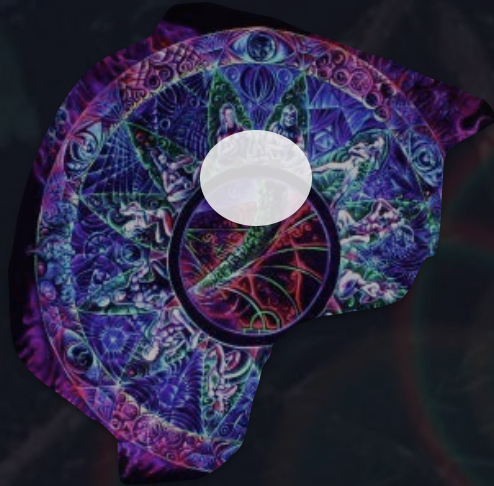The Project

information
interface
user

information
interface
user

information
interface
user

information

user   interface

information

user   interface

Knowledge Art

One User

Two Users

Three Users

Three Users

claudiajacques.org

cj@claudiajacques.org

Claudia Jacques [M Cardoso-Fleck]
SUNY WCC Art Dept
Planetary Collegium University of Plymount

Efharisto!