

Digital Art: foundations, lessons and skills

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Topics

- 1. Foundations:** Pioneers Contribution; Digital Medium in Arts;
- 2. Artifacts & Lessons learned:** Differential Characteristics and Definitions; Artifacts;
- 3. Skills:** Digital Artist / Master in Digital Arts shall hold

Foundations: the Pioneers

Foundations: the Pioneers (Dada)

DADA characteristics:

- ✓ unconformity with accepted rules and conventions.
- ✓ scandal was the leitmotiv to shock their audience into self-awareness
- ✓ embraced chaos (anti logic) and irrationality
- ✓ presented as anti-art
- ✓ certain form of nihilism (an extreme form of skepticism that denies all existence)

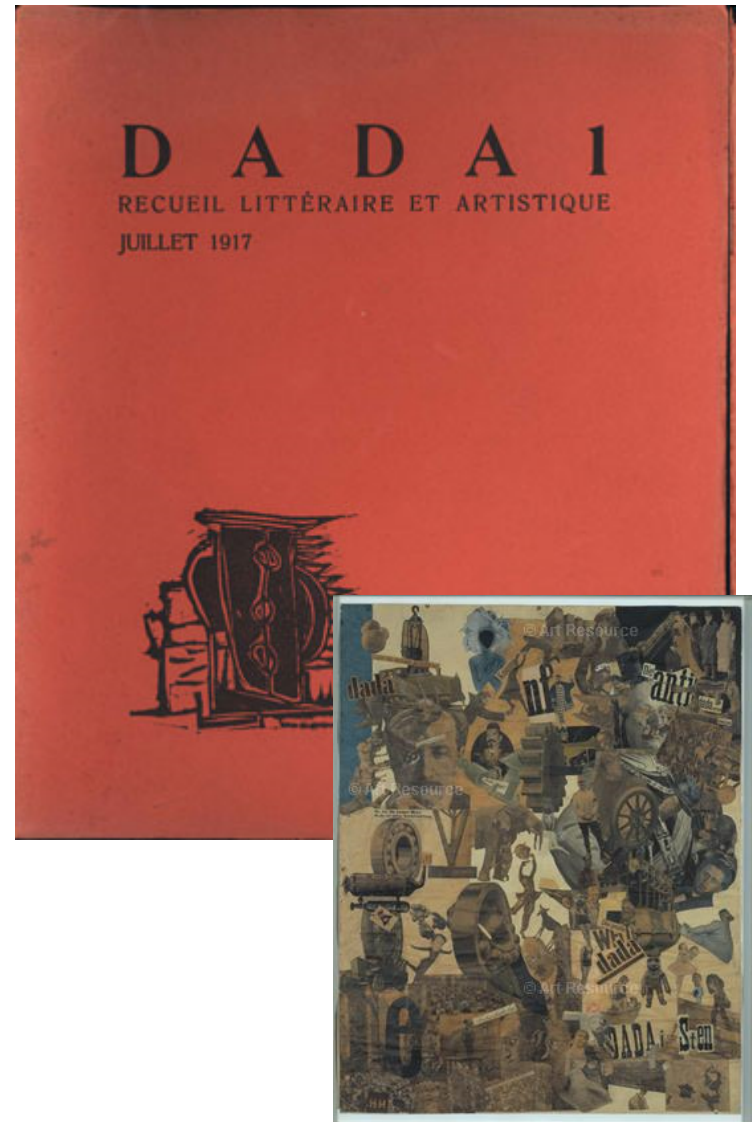


"Fountain", by Marcel Duchamp

Foundations: the Pioneers (Dada)

Dadaists adopted the principles of abstraction, spontaneity and chance and employed the technique of collage and odd juxtapositions of image and text to create a sense of the absurd.

Dadaists were united not by a common style, but by their rejection of conventions in art and thought.



Foundations: the Pioneers (mixed)

“an interactive machine that invited users to interact with concentric rotating glass plates to generate visual effects”

Main Characteristics:

- interactive
- spontaneous and dynamic
- appealing for other senses



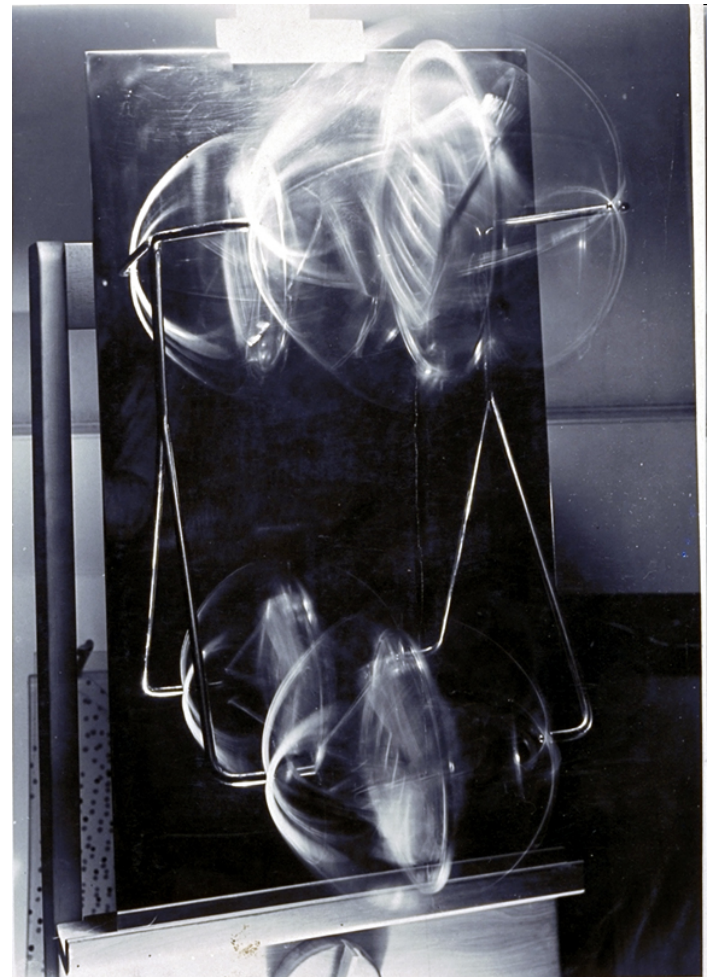
“Rotary Glass Plates”, by Marcel Duchamp & Man Ray (1920)

Foundations: the Pioneers (mixed)

“a device for creating light sculptures by projecting silhouettes in movement.”

Main Characteristics:

- volatile (a certain sense of *virtuality*)
- spontaneous and dynamic
- appealing for other senses



*“Kinetic Sculpture Moving”, by
László Moholy-Nagy (1933)*

Foundations: the Pioneers (Conceptual Art)

Conceptual art: the **idea or concept is the most important aspect of the work.**

- concept is king
- not necessarily aesthetic
- appealing to other senses



“One and Three Chairs”, by Joseph Kosuth (1965)

Foundations: the Pioneers (Fluxus)

Fluxus art movement has extensively explored the idea of **instruction-based generated art** along with the **immersion of the audience** in the event, forcing an **interaction** between the spectator and the artworks

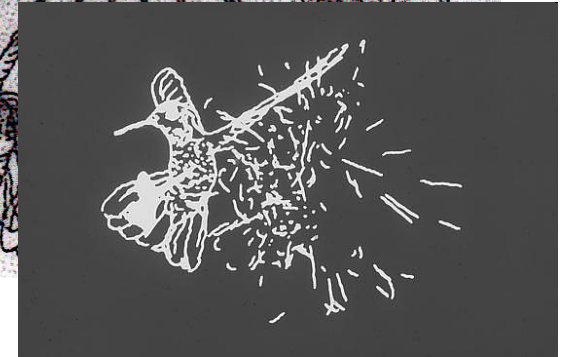
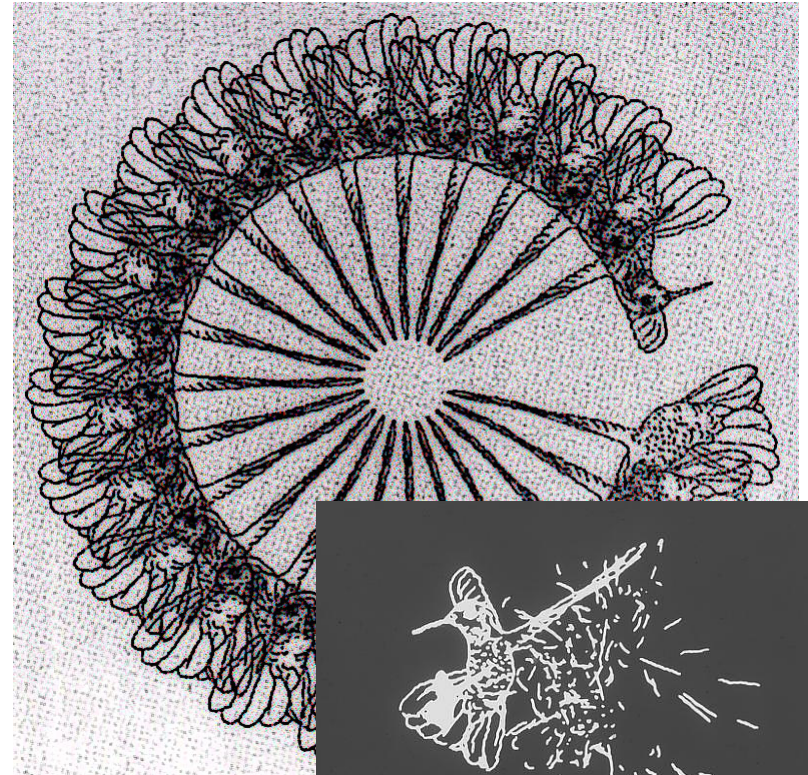


“Musique télépathique n° 5 (Telepathic Music #5)”, by Robert Filliou (1978)

Foundations: the Pioneers (mixed)

Art as “experimental research in **computer-generated transformations** of visuals through mathematical functions.”

The hummingbird is a good example of computer-generated animation.



“Hummingbird”, by Charles Csuri (1967)

Foundations: the Pioneers (OULIPO, EAT)

OULIPO (Ouvroir de Littérature Potentielle) group (1960, Raymond Queneau and François Le Lionnais), explored the concept of **combinatorial** and **strict rule-based** process of the Dadaism poetry, in conjunction with the notion of the **random access**. It is a form of **controlled randomness** to generate and activate instructions for information access and processing.

EAT (Experiments in Art and Technology) group (60s, Billy Klüver), started collaborations among artists, engineers, programmers, researchers and scientists that would become and remains a differentiate characteristic of today's digital art communities, i.e., they usually involve the **collaborative work of a multidisciplinary team**.

Foundations: the Pioneers Contribution to today's Digital Art

The pioneers have created and explored new paradigms, namely:

- unconformity with accepted rules and conventions.
- embraced chaos (anti logic) and irrationality
- **Interactivity**
- spontaneous and dynamic
- appealing for other senses
- volatile (a certain sense of **virtuality**);
- concept is king
- not necessarily aesthetic
- **instruction-based** generated art
- immersion of the audience in the artwork
- computer-generated transformations and **controlled randomness**

Foundations: the Digital Medium

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- ✓ Art and culture are social phenomena, consequential of the social interaction, of the individual and collective imaginary manifestations, that together establish a common **communicational and informational space** embracing **artifacts** said to be cultural and artistic.
- ✓ These **artifacts**, where some are possibly non-tangible, constitute, in fact, the resulting product from the artistic and cultural phenomenon. They are expressions of our imaginary.

Foundations: the Digital Medium

... common **communicational and informational space**, supported by cultural and artistic artifacts

i.e, the central element here is **INFORMATION (or informative content)**

... and the artistic and cultural Artifacts can be defined as **Informational Objects**

Foundations: the Digital Medium

- ✓ **Art objects** might be described as **symbolic objects** that aim at stimulating emotions.
- ✓ They **reach us through our senses** (visual, auditory, tactile, or other).
- ✓ They **are displayed by means of (un)physical material** (stone, paper, wood, mechanics, electronics, digital, etc.) and combine some patterns to produce an aesthetic composition.
- ✓ Their creator intends **to convey some message**, normally to suggest some state of mind or **to induce an emotion** and the consequent feeling.

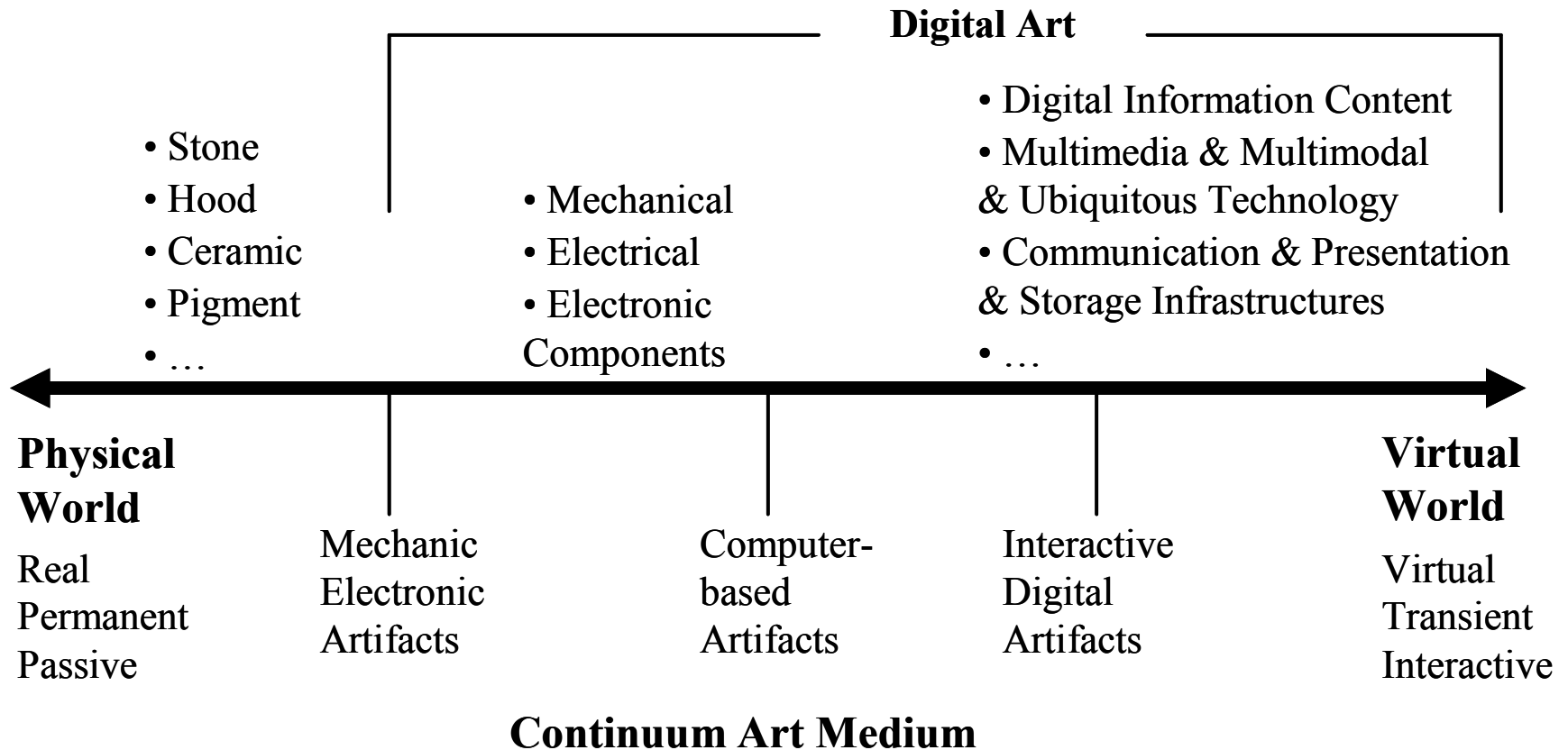
Foundations: the Digital Medium



"Autopoiesis" by Ken Rinaldo (2000)

Foundations: the Digital Medium

- ✓ The computer medium is defined here as the **set of digital technologies ranging from digital information formats, infrastructures to processing tools** that together can be taken as a continuum art medium used by artists to produce digital **artifacts**.
- ✓ Digital art applies the computer medium **both as raw material** (e.g. the digitally coded information content) and **as a tool** of enhancing creativity.



Lessons Learned: Digital Art' differential characteristics

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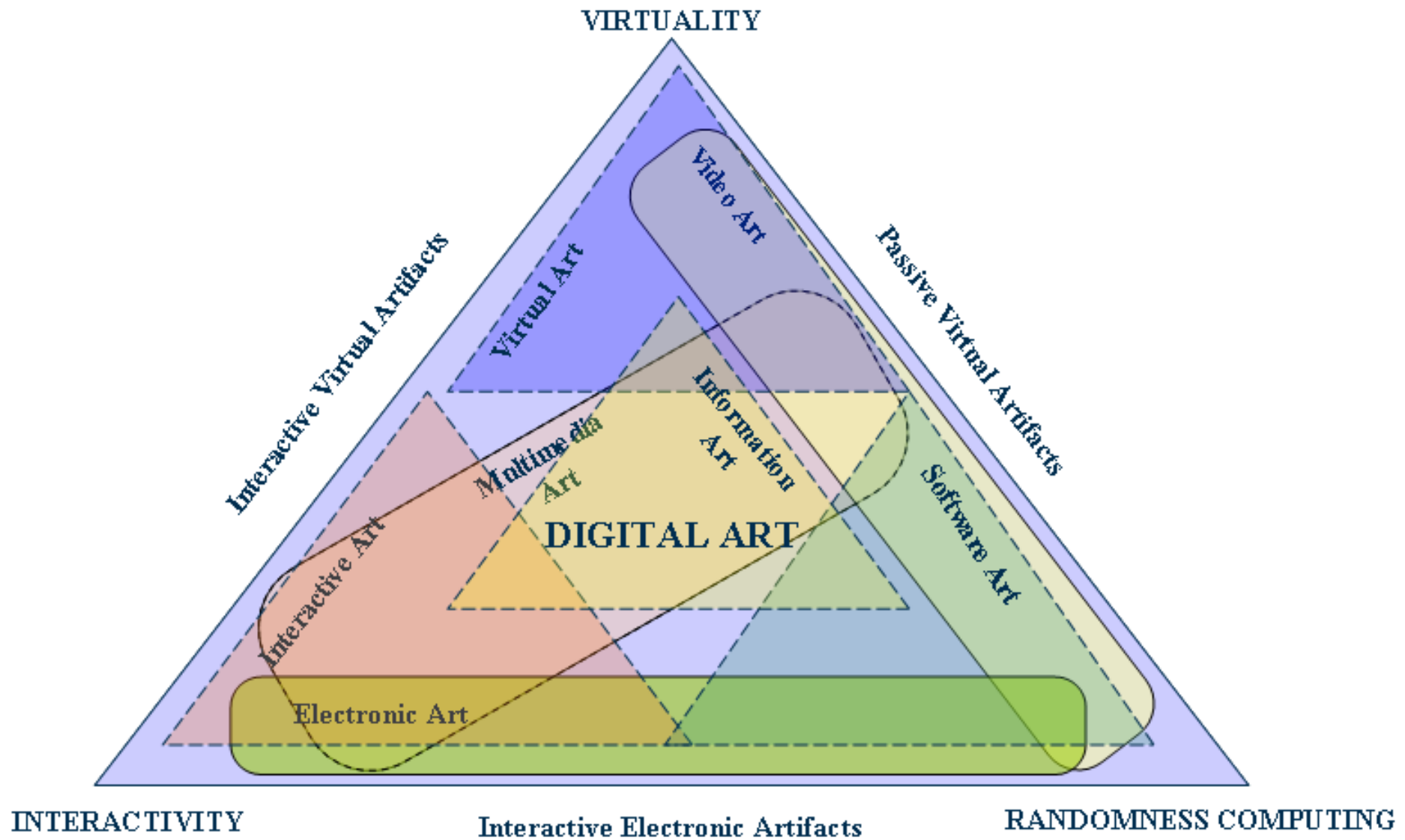
Digital art is mainly based on three grounding concepts:

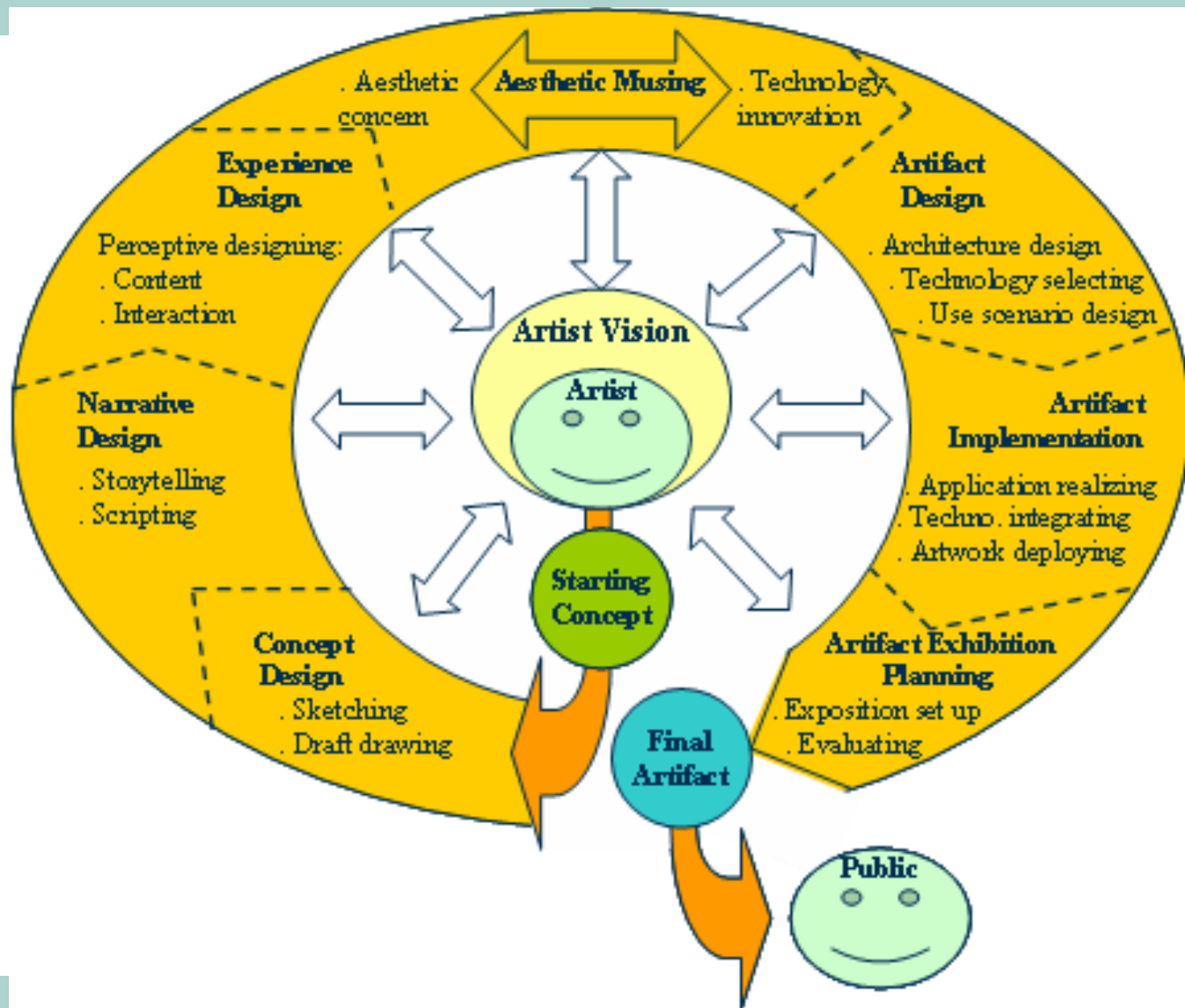
- ✓ ***Randomness Access***: (pseudo) non-deterministic instruction-based algorithms open the possibility of instant access to media elements that can be reshuffled in seemingly infinite combinations;
- ✓ ***Virtuality***: the physical object is migrated into a *virtual* or *conceptual object*. The *concept* itself becomes perceptible through its virtualization/perception;
- ✓ ***Interactivity***: the viewer may assume an active role in influencing and changing the artwork itself.

Lessons Learned: Digital Art' Differential Characteristics

Digital art can be defined as
*art that explores computers (tools, technologies
and digitally coded information content) as a tool
and material for creation.*

Digital content is defined as informative material
of digital nature that holds the ability to be acted to
transmit a message.





Skills: a Digital Artist should possess

Skills expected in a creative person – digital artist

“... should be able to **combine** a **deep understanding of the technologies** like applied computer graphics, digital sound and music, computer vision, digital storytelling, virtual reality, sensors and actuators, among others, with the exploitation of techniques of **communication and information media** and of **artistic and intercultural expression and intervention**; to **conceive/develop new applications, products, narratives and aesthetic experiences**, for **areas of intervention** in the **creative industry** (multimedia), **art and culture**, **communication, education and entertainment**.” (A. Marcos)

Skills expected in a MA in Digital Arts

- **Theory and Foundations of:**
 - Contemporary Art / Art Communication and Education
 - Computer Aesthetics: how computer and digital medium enhances new aesthetic narratives/experiences
- **Knowledge and Practice with:**
 - Digital/Computer Technologies (visual, auditory, haptic, interactive, etc. nature);
 - Interaction/Interface/Content/ Design;
 - Computer Programming (including basic electronics);
 - Artistic / Intercultural Intervention and Exhibition Logistics
 - Research Methodology, Scientific Writing, Project Management
- Other Skills (e.g English language, human perception, fund raising, etc.)

Thank you !