**FEDERAL UNIVERSITY OF SANTA MARIA**
**CENTER OF ARTS AND LETTERS**
**POST-GRADUATION PROGRAM IN VISUAL ARTS**

**Giovanna Graziosi Casimiro**

**MIXED REALITY AND HALF EXPOSURE**
**IN CONTEMPORARY ART: INSITU <> INFLUXU**

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**IN CONTEMPORARY ART: INSITU ◇ INFLUXU**

Dissertation presented to the Program
Of Visual Arts,
Federal University of Santa Maria
(UFSM, RS), as a partial requirement for
obtaining the title of **Master of Arts
Visuals.**

Advisor: Profª Drª. Nara Cristina Santos

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**DEDICATION**

I dedicate this research to everyone who has taught me about life, time

And space. I thank my parents, my family and my boyfriend.

by patience. To my grandfather Mario Mauro, I hope he celebrates

In his own time-space the fruits of what he taught me in life.

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**SUMMARY**

**MIXED REALITY AND HALF EXPOSURE IN CONTEMPORARY ART:**
**INSITU ◇ INFLUXU**

AUTHOR: Giovanna Graziosi Casimiro
ORIENTADORA: Nara Cristina Santos

This research, in the field of theory and history of contemporary art, studies modes
Of Mixed Reality in the exhibition space and the consolidation of the
Expositive Medium. The proposals of the terms "public relations cycle ◇ work ◇ means"
(Explains how the elements of the Expositive Medium relate) and "dynamics
Insitu ◇ influxu "open a punctual discussion about artistic space as a medium

interactive. From the context in Art and Technology, examples of
Application of Mixed Reality in institutional spaces, which point to the pertinence of
Of the conceptions pointed out. The works of art ARART and Extinção are analyzed,
The MoMA museums, the Krakow National Museum and the London Museum, and the project
*Talking Statues* developed in the urban area of London. The examples allow
Understand the way space unfolds through many realities
And also the permeability between the virtual and physical worlds.

**Keywords:** Mixed Reality. Expositive Medium. Exhibition Space. Art and
Technology. Contemporary art.

# ABSTRACT

## MIXED REALITY AND EXHIBITION MEDIUM IN CONTEMPORARY ART: INSITU ◇ INFLUX

AUTHOR: Giovanna Graziosi Casimiro
ADVISOR: Nara Cristina Santos

This research in the field of theory and history of contemporary art, study Configuration modes of Mixed Reality in the exhibition place and the consolidation of Exhibition Medium, structured by technological dynamics. Aims to discuss the cycle Of relations between public <> artwork <> mediums presented as an explanation that How the elements of the Exhibition Medium works, and it's result is the dynamic

Insitu <> influx. The interactive artworks ARART and Extinction, the exhibition WeARinMoMA, the Krakow National Museum, the Museum of London and the Project Talking Statues, contribute to think the specific conditions of an interactive Exhibition Medium, which dynamic create a constant transitions of power and Sensibility. Emerging from the context of Art and Technology, applications of Mixed Reality is analyzed in institutional places, whose examples help to classify and Understand how the space unfolds through many realities and the constant Transition between the virtual and the physical dimension.

**Keywords:** Mixed Reality. Exhibition Medium. Exhibition Place. Art and Technology. Contemporary Art.

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**SUMMARY**

## 1. INTRODUCTION

This research, in the field of theory, criticism and history of contemporary art,

The concept of Expositive Media, while an interactive exhibition space

by application of Mixed Reality, to *mobile* devices. The analyzes

Focus on how the dynamic insitu <> influxu changes the space-

Temporal and provide new exchanges between public <> work <> medium. Therefore,

Three categories of use are proposed: Mixed Reality as a work of

Art, dynamics of visitation and institutional expansion. The discussion is

From the concept of Expositive Medium, while an exhibition space,

Modified by interactivity, by the technology of Mixed Reality, and the

Developments related to the remodeling of reality.

Reflections on time, space and potential realities are proposed,

Which condition specific sensitive dynamics through flows. The reality

Mista changes the space, because it resizes the perception as it adds

Layers of experience, and time, which runs between the physical and virtual worlds

Affirming the idea of a common mixed reality. The sum of realities is

Inside and outside the Expositive Environment, however, it makes it possible to

Of the mixed present because the user visualizes the flow changes between

Physical and virtual.

In this way, the regime of flows generates a particular dynamics of the environment,

Denominated in this research, insitu <> influxu. These are conscious exchanges between

The virtual and the physical, making them mixed through applications of Reality and

Increased Virtuality. The Expositive Medium, the unfolding of realities, the

Flows and the use of the Mixed Reality base this study on the redefinition of

Spaces and modes by computer technology.

The research theme is the result of a process initiated in the baccalaureate

In Visual Arts (Federal University of Santa Maria, RS / 2009-2013), where

There was an approximation with research in history, theory and criticism in the field of art

Contemporary art. This deepening in the questions of Art and Technology is

Directly linked to the activities of the research group Arte Tecnologia / CNPq and the

LABART (research laboratory in contemporary art, technology and media

Digital), coordinated by Prof. Dr. Nara Cristina Santos. Under his guidance,

Three and a half years (FIEX, FIPE, FAPERGS, CNPq scholarships), were

Issues of technology and science in the artistic field. O

Involvement with the research projects "History of Contemporary Art in RS:

Art, technology and digital media "(2010); "Contemporary Artists in RS: art,

Technology and digital media "(2011-2012); Search / extension "Guild: galleries

In contemporary art "(2011-2013) has generated great interest in

Transformations of exhibition spaces, in the face of the technological advance of the

XXI.

Subsequently, an internship was held at the São Paulo Art Museum

(MASP), the International Electronic Language Festival (FILE), and the

search and content of *Highlike.org* team *(CloudBook* project, with book

Online content through augmented reality) developed by

Founder of FILE, Ricardo Barreto. After participating in the

Exhibitions and curatorships, and with access to the dynamics of

Institutional arrangements, document management, visits and operation of the MASP reserve

And FILE, questions arose about the object of this research. Thus,

The project of this dissertation was begun, to think about potentialities in the field of

Computational technology that potentiate expository modes.

These specific aspects are thought through the technology of Reality

Mista, an interactive instrument for contemporary art, in the artistic and

Expository It reflects on the condition of space, time and many

Constructed realities, in successive unfoldings with the interactor, in a

Mixed consciousness (here understood as the consciousness that the user possesses

While interacting with the mixed Reality). The dynamic insitu <> influxu changes the

Sense of events (which take place in multitemporal flows), generating

one        movement        Informational / relational        on here        understood        as

Expansion <> contraction.

The methodology adopted consists of a bibliographical review of the space

Expository, binary technology, concepts of space, reality, flows,

And the definition of the Expositive Medium. Iconographic revision, selection of

Works / museological institutions and critical analysis on the use of Mixed Reality in the

Expositive Medium. Methodological development occurs in the following stages:

a) **Literature Review:** selection of readings related to the concepts of

Exhibition space, binary technology, space and reality. In this review, it is

Possible to establish connections between terms, to deepen and propose

Specific;

b) **Review and iconographic survey of artistic projects and**

**corporative (generally technology companies):** they are

Selected some Mixed and Virtual Reality projects, with the objective of

The proximity between the technological and artistic field, especially

In the institutional space. The chosen examples allow us to think

Expositive and its establishment;

c) **classification of objects:** three categories that include ways

Mixed Reality applications in a critical case approach. Each

Class has two objects of analysis. From Museums, Institutions

Cultural and art and technology (MoMA, *Museum London, Sukiennice*

*Museum,* WeARinMoMA exposure, ARART and Extinction works, including

Others), the renovation of the exhibition space is

Of the use of Mixed Reality;

d) **Conclusion:** works the prospect of a collapse in the face of all these

Forces that arise in the field of sensitivity. It is proposed

Interactive hole, which represents the counterpoints of the Expositive Medium.

The first chapter presents concepts, the history of the exhibition space and the

Binary technology, through authors such as Hans Belting, Oliver Grau, Sonia

Castillo, Christiane Paul, Giselle Beiguelman, Lev Manovich and others. There is

Attempt to bring the concepts of exhibition space and binary technology closer to the

Their encounter in the history of recent art. Three terms are presented for

Discussion, which point out the similarities between exhibition space and technology

Binary: control, obsolescence and inclusion. The notion of control is relevant to

Spaces that maintains hegemony in the field of art, as well as the

Binary technology, which exercises control over its users, systems and networks. THE

Obsolescence is understood as the need to review dynamics and processes

Structural in art, computing is part of the market through obsolescence

Programmed. Inclusion is the third item, presented as a result of the two

First, because it is about the reformulation of the control processes, before a

Condition of obsolescence, which leads to an inclusive process.

On the exhibition space and the binary technology, it is understood in a

The first moment that the computational devices are instrumentalized by the

Exhibition space, in a shared relationship with the public. However, the

Binary technology is not only an instrument of inclusion, since computing

governs a larger system of data *(Big Data),* in which the art context is inserted.

For this reason, the opposite movement is observed, in which the exhibition spaces

Are appropriated by computer corporations for the manipulation of ideas. In

Counterpart to these moderate actions of large companies (such as Google),

Free software movement, whose programmers and

computing betting on *open source* tools, open systems and

Shared, resignifying the inclusion and the idea of capillary intelligence,

pointed out by Giselle Beiguelman [1]. Reality is seen in the first chapter because it is

Fundamental concept for this research, after all, Mixed Reality derives from a

Series of research and construction of realities, starting from the field of

Imagination and art. Oliver Grau (2001) helps build the various Realities until

The conception of Mixed Reality and its technical specificities. The insertion of

Binary technology in the exhibition space alters reality and space through

Mixed Reality. An exhibition space remains "space" as long as its

Characteristics are conventional, because when the dynamics is linked to the data

Binaries, information flows, sharing and interactivity relations, the

Spatiality changes. For this reason, the end of the first chapter discusses the

Expositive as the space modified by the binary device and Reality

Mixed. Rudolf Frieling, Pierre Lèvy, Oliver Grau, Edmond Couchot, Claudio Kirner,

André Lemos, Glauco Todesco, together with other authors, help to think

questions.

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[1]BEIGUELMAN, Giselle. 1st semester / 2015. Lecture held in the discipline AUH 5862 - Post-Graduation in Architecture and Urbanism-USP.

The second chapter raises the concept of insitu <> influxu as dynamics

Resulting from the use of Mixed Reality in Expositive Means. Sustained

In this dissertation the concept of dynamic insitu <> influxu, capable of representing the

And relationships generated in an interactive environment. The middle

Expository is constructed by the sum of realities and powers: physical reality is

Virtuality, generating a process of exchange, responsible for the emergence of

Of Mixed Reality. From the institutional point of view, museums are composed of

Layers of time and work their power relation as space

Determinant in the art. However, through the dynamic insitu <> influxu, space

Expository sums up the times and the realities unleashed by Mixed Reality.

The interactivity is analyzed by two possible origins in the Expositive Environment:

Interactivity via work and via medium, which assess how the device

Computation interferes with a collection or how much an interactive work

Refurbishes the space. Such processes depend on the computational interface, the

Which dictates the rhythm of the dynamic insitu <> influxu. Through authors like Pierre Lèvy,

Lucia Santaella and Cleomar Rocha, the concept of the interface is presented.

Construction and application. In this sense, some projects and research are discussed.

Of Mixed Reality for exhibition spaces, which confirms the mobilization of

Researchers, computer scientists, artists and large companies, in

Provide interactive experiences and immersion.

In the third chapter, we analyze the application of Mixed Reality in the

Expositive as a work of art; While dynamic and museum collections;

As an institutional extension. Each one has two analysis of the application of

Mixed Reality, among which are works of art with Augmented Reality,

ARART and Extinction, the museological actions WeARinMoMA and *Secrets Behind Paintings* and

the *Streetmuseum* and *Talking Statues* applications. Interactivity and its origin (via

Work or via medium) is analyzed, as well as the public relation <> work <> medium, which generates

A series of exchanges and consolidates the design of the dynamic insitu <> influxu. At

Analyzes affirm the relationship between exposure space and interactivity, in which

We can see the data flows that model the space-time optics and the modes

Of mobile communication. At this point in the research, there is the concern of

A critical opinion on the use of binary technology in the institutional spaces and

In the field of art. After all, Mixed Reality propitiates the deconstruction of space-

Time, in a mixed time of sensitivity. The use of mobile interfaces in the

Expositive directs network dynamics, whose performance of the visitor (user) occurs

In a larger, collective plan of actions connected by the flows. It is a

Networks and computational devices, on which

Contemporary art establishes new ways of acting through objects,

Systems, connections that transcend conscious reality, reviewing relationships

Space-time.

    A new perspective emerges on the movement of the Middle flows, which

Results in an extended conclusion about the expansion of data contraction and

Sensitivity, direction and displacement of powers / present information,

Especially in the analyzed projects that cover the urban space. For

To conclude this dissertation, an attempt is made to review the

Proposed from the Expositive Medium, creating analogies between physics and art. O

The last proposed concept is that of an interactive hole, which reflects the

Paradox / lag of information, resulting from the new

Dynamic interactive expository. The Mixed Reality ceases to be only one

Technology, and becomes a condition of human consciousness, always in connection

And unable to distinguish the physical from the virtual, in a possible lapse of interactivity

Other levels of artistic-sensitive experience,

Universes, worlds and realities.

## 2 EXHIBITION SPACE, BINARY TECHNOLOGY AND MIXED REALITY

Computer devices coupled with human perception

Contemporary, unifying condition between the sensitive, the technological, the artistic and the

Computational. This closeness is perceived throughout history, as the

Human being sensitizes the machine, and vice versa. Throughout the technological and

Artists were attracted by the possibilities of expression through

Materials and techniques, incorporating them with a certain freedom in their

production. Binary technology refurbishes these experiments:

> The tools, devices and technology elements used in the
> Production, exhibition and dissemination of artistic proposals multiplied
> Exponentially, (...) the omnipresence of technology in all its
> Aspects of our lives changed our behavior and our
> Aesthetic postures. [2] (Vellosillo, 2014, p. 137).

The notion of omnipresence shapes human relations through

Devices and interactive commands, whose interfaces assume a fundamental role

In the way man perceives the world and communicates. Lev Manovich (2002)

Reflects how the computational interfaces act on art and communication, in

A cultural digitization process that evidences the emergence of structures

As a reflection of the binary revolution on visual culture.

Giselle Beiguelman (2013) points out the process of cultural digitization for

Think of the dichotomy of the real / virtual. According to her, it is not about the age of the virtual, but

Of the post-virtual, in which, according to André Lemos (2008), society

phase of the *upload* and enter the constant *downloading* information and data. Arises

Space and time united between the field of human perception and that of technology

Binary

> The relationship between art and technology has become increasingly narrow, which
> Stimulated the participation of other areas of knowledge and innovation
> Sciences such as genetics, robotics, biology and artificial intelligence
> As part of artistic proposals, among which
> Video art and net art. The reciprocal influence between art, technology,
> Science and society is an example of the permeability between

[2]VELLOSILLO, Ariane Vanrell, "Conservation Strategies and Digital Humanities" in BEIGUELMAN, Giselle (Org). Possible Futures: art, museum and digital archives. São Paulo: Peirópolis, 2014, p.137.

Areas of knowledge that characterize contemporary culture. [3]
(VELLOSILLO, 2014, p.137).

Such permeability of contemporary culture strengthens

Transdisciplinarity and the emergence of technology in the field of art. Steven

Johnson (2001) points out that technology and culture have been together forever,

Because they build the human experience. Artists, philosophers, writers, all so

Scientists as scientists, and these as creative as the first. It is not without

Reason that companies like Google, seek more than computer scientists

Or technically trained people: they are looking for ideas, innovative people and

Entrepreneurs. The history of computing is confused with the history of

Humanity and art, in the XX / XXI century. The Culture of the Interface and the

Software in which human and device seem symbiotic, bases upon which

Reflections on the Exhibition Space, Binary Technology and Reality

Mixed, pillars of the Expositive Medium. Thus, the connections between computing, space

Exhibition, technology and art, are understood, transdisciplinarmente,

Expanding the many realities and multi-temporalities.

In this chapter are exposed historical, theoretical and conceptual aspects of

Binary technology and exhibition space: their similarities in the construction of

Tools and processes. It is evident the proximity of these fields

Of knowledge and the justification of the union of techniques / languages for the

Potentialization of art. The concept of reality stands out because the establishment of

Computing interferes with how society relates to realities.

existing. The Expositive Environment is conceptualized based on a history of conception

Of space and its configuration through scientific discoveries, resulting in

A structure modeled by data flows. The subchapters deal with the role of

Computational interface, which puts the world of technology related to

Culture, and vice versa.

[3]VELLOSILLO, Ariane Vanrell, "Conservation Strategies and Digital Humanities" in BEIGUELMAN, Giselle (Org). Possible futures: art, museum and digital archives. São Paulo: Peirópolis, 2014, p.137.

2.1 EXPOSURE SPACE AND BINARY TECHNOLOGY: CONTROL -
OBSOLESCENCE - INCLUSION

Hans Belting (2006) points out the condition of the museum in

Contemporaneity as a dispute between the past and the future. This conflict

Becomes clear as the concept of exhibition space is given by the history of the

Museum and process of reformulation throughout the 21st century. The debate about

Remodeling brings about the passage of the conventional museum, on the

Various exhibition modes and future unimagined media.

> The dispute over the history of art has as its present place, and
> Also the future, in the museum of contemporary art. In this place
> Exposed only to contemporary art, lies the history of art.
> However, there are doubts here [...] if the idea of exposing
> History of art in the mirror of contemporary art is still universal [...].
> It is a matter of institutions and not content [...] after all, the cathedrals
> Have long survived the founding of museums. Why the
> Present museums should not experience the founding of other institutions in
> That art history no longer has a place or appearance
> completely different? (BELTING, 2006: 135-167.)

Marília Cury (2005) builds the idea of a museum from the figure of Orfeu: na

Ancient Greece, Museum was the son of Orpheus, a personification that makes him capable of

To act, to do, to recover, to coordinate poetry and knowledge through

Meanings and values. According to her, from this point of view the museum is

Place, thinking the meaning of things in the world and in life, in poetic mission (such

Like the Greek view) constantly reworked.

The term museum of Greek origin means "Temple of the Muses" and is used

From the period of Alexandria to designate the place of study of the arts and

Sciences. The definition of the *International Council of Museums* (2001) to "museums" is

Permanent non-profit institution at the service of society and the

Its development, open to the public and which acquires, conserves, investigates,

And exposes the material testimonies of man and his environment, for education and

Society's delight.

According to Beiguelman (2014), the origin of the museums dates back to the 16th century

Where the collections belonged to the aristocracy: there was a class force, where

Elite was privileged, a fact that originated the modern museums, created in the

XVII. The first came through the donation of John Tradescant's collection by

Elias Ashmole (1617-1692) to the University of Oxford *(Ashmolean Museum)*. O

Was created in 1759 by the English Parliament with the acquisition of the

Collection of Hans Sloane (1660-1753), today the British Museum. The first institution

Was created in France by the Revolutionary Government in 1793 as the

Of the Louvre. Throughout the 19th century, the Prado Museum (Spain) and the

Mauritshuis Museum (Netherlands).

In Brazil, in 1862, the Museum of the Historical and

Geographic Pernambuco. In the 20th century, others were inaugurated among them

Museum of Art of São Paulo, founded in 1947. Since the 1950s, there has been a

Repositioning of museums, because "the conservative and propagating role of the

Of a historical narrative has given rise to that of host museums and propagators of

exhibition packages "4,          Highlighting cultural popularization and accessibility

Information, contributors to inclusion, in exhibition spaces of the 21st century.

> The idea of a public museum began with the Enlightenment, with the
> Louvre as one of his first personifications. Inaugurated in
> 1793, the Louvre was the first to allow free access to the old collections
> Of France for people of any social stratum. The age of
> Museums began in the nineteenth century and probably not yet finished,
> As museums continue to be founded around the world, many
> Often becoming the central element of new urban planning and
> The visual demonstration that a state, which until then had been marginal,
> The wonderful world of capitalist democracy. Still, museums
> Of today - like everything else - are confronting the challenges of
> digital age. No one knows if museums will survive these challenges, and
> To what degree your traditional model will have to be revised to fit
> The new world order. 5 (BEIGUELMAN, 2014, p. 235).

The evident institutional repositioning is the result of a possible crisis

Belting (2006) as part of the art crisis, which

However, according to him, this crisis is stifled by an identity of the

Museum rebuilt from the entertainment needs of the public.

Lisbete Gonçalves (2004) explains that the profile of the museum as an institution and

its pristine collections are held in check, due to popularization

some of his works while mass icons. She points out that museums are

questioned as a cultural instrument and charged for their passivity. In 1971,

ICOM is the conference of Paris and Grenoble, whose theme - The museum in the service of

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[4]CASTILLO, 2008: 230.
[5]QUARANTA, Domenico, "Saved by copying: webcolecionismo and preservation of digital works of art", in BEIGUELMAN, Giselle. Possible future: art, museum and digital files. São Paulo: Peirópolis, 2014: 235.

man of the present, the future - places such spaces in a unique position. In
1977, the opening of the Georges Pompidou Center marks a new type of
institution symbolized by renewing museum share, according Gonçalves
(2004). Their motto is to "open museum, broadcasting and communication tool
permanent, whose effectiveness depends, first of all, the architectural structure
Connections to the urban life. " It is argued that the structure of museums since then
is linked to the mass media and consumer, comparing them to a species
staging with a diverse agenda and full of spectacles.

   It is noticed that the exhibition spaces are transformed into instruments
consecration of the new museology, starting a repositioning towards the
Expository half due to "heterogeneity of the general public who want to attract.
Search up new methods and technologies of communication and seeks to score with
dynamic cultural action. Universalize the principles of museology
contemporary. " [6]

   In the twentieth century, mass communication changes the way you build
the culture of pictorial records. Sonia Castillo (2008) points out that
contemporary has acquired a multiple character, in a kind of
bonding and entanglement specialty sphere besides the art. occurs
adoption of new exhibition formulas that narrows the relationship between art and square
and for this reason, arouse the need for new institutional actions. There is,
Also, pressure from the public which, according to Belting (2006), in search
museums that which can not find in books. It puts too, that
museums are not able to meet the demands of his visitor, and
that generate alternating exhibitions and a controversial programming.

   Maintains the spatial restructuring exhibition by David Sperling (2012)
which punctuates the contemporary architecture of museums as a potent agent
insertion and maintenance of cultural institutions, making visible the need for
dynamic renovating.

     Since the invention of the modern museum, from the late eighteenth century and
early nineteenth century, and in parallel, from the conversion of old
heritage buildings, has developed a specific architecture,
especially for its temporary exhibitions or long term
linked to the preservation conditions, research and communication
collections [...]. Thus, the shape of the temple with dome and facade with

[6]GONÇALVES, 2004, p 78.

> colonnaded prototype was imposed the same that imposed the gallery, conceived as one of the main models for Fine museums Art [...]. Although the shape of the museological buildings has generally focused safeguarding collections, it evolves to the extent that develop new functions. (MAIRESSE and DESVALÉES, 2013 p 29).

An interactive dynamic can keep virtualized in a space-time itself, or transit between potential realities (if the Mixed Reality). THE mixed and transient design brings to the Museum of the XXI century unprecedented possibilities action and structural reassessment. The review shows that the materiality exhibition spaces are built on multi-temporality. Castillo (2008) points out the exhibition as cultural spaces, a sum of time: past, present and future, in the form of spectacle. It is clear, she said, that the object Art is not simply exposed as sensitize the public and has mediations and themes.

Since the early 1980s, the transition is built an environment large mass of exhibitions, with popular programs, in a game consumption and closeness to the public that gains popularity and shows that the "Museum field is still in the turn-way" [7] if the *marketing* and institutional tourism. Belting (2006) points out that art, by itself, is not consensual and for this reason there is a difficulty of the exhibition spaces to absorb contemporary artistic demand, a fact that generates a lot of controversy in content of the exhibition halls and the role of the institution. He questions whether the new Art is the one who seeks the museological context, or whether it is the museum that seeks new art. it confirms that this fact exposes a number of inconsistencies, which depart the very society that worships a bourgeois culture in a period where there more bourgeoisie.

As the exhibition space popularizes your schedule allows dialogues on the location of production: artist, public works and institutions have their restructured limits, and the interests that prevail beyond the management of museum. This idea is confirmed second Rudolf Frieling (2014), which reflects on the change the place of production, because the work is done in partnership and for the exhibition spaces, which act as (co) producers under the conditions and contexts

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[7]MAIRESSE and DESVALÉES, 2013, p 24.

the works exhibited. In other words, the museum takes on the role of producer to redistribute functions and powers.

If before "I was going to the museum to see something that our grandparents already put on the same place, now you go to the museum to see something it could never be seen. "[8] The exhibition space seems to gradually engage the public in a new essence. Belting (2006) states that the audiovisual room in the museum is able to engage the visitor into a single optical impression and presents itself as a place fancy replacing the old place of training (embodied by the concept of Temple). He maintains that the traditional notion of museum and exhibition space gives place despacialização of human visual fantasy, due to the emergence of the term installation that reinvents the interior of the museum.

As Belting, supports the idea of a modified area by Current human-machine relationships, belonging to a new order of sensitive determined by interactivity. Such a dynamic network tightens the perception of space as it enables action in individual space-time / collective (each user with your device, or multiple users with a common device, whose reactions are different). Thus, it is observed that the debate on the neutrality is relevant because an interactive space assumes greater neutrality, after all, open to the visitor varied actions. But the term neutrality can be applied conversely, the role of neutralizing the free visitor will on space, scaling and controlling their actions. The predicament of the "neutral" ensures this new exhibition space a converging-diverging point, whose existence determines a lapse in the notion of space and museum.

> White cube as the response to the desired space neutral
> the full enjoyment of the art, shows, just like its opposite one
> space based on the optical-geometric determination, which presupposes and
> regulates the contemplative attitude of the public. As physical node system
> movement and art exhibition, sucks specifics, file your edges
> and "adapts" to your space, including the works that take as their theme
> questioning the institutional, political and Space Museum. As
> suction machine, the museum absorbs works for you, but not itself. At
> transformations undergone by the artistic action since the 1960s have,
> as a result in museums, only the "adjustments"
> necessary for the constant inclusion but no contamination
> conceptual for reproposição of its architecture. [9]

[8]BELTING, 2006: 140.
[9]SPERLING, David. The architecture of contemporary museums as agents in the art system. Permanent Forum, 2012. Available at: http://www.forumpermanente.org/revista/edicao-

Sperling values included in the term museum context, it helps in

understanding of the contemporary role of the museum and its approach to

Binary technology also affirmed by Gerfried Stocker [10] , to the point that

first library was organized by Leibniz [11] , hired by the aristocracy

Seventeenth century to catalog a huge collection of books. The mathematician and polymath

created an algorithm to solve the request. It is highlighted that the connection between Leibniz

and cataloging of objects / information approaches the museum principle

mathematical / digital, for as acquiring new exhibition modes and

architectures, reinvents its relationship with public / artist / work pierces the

Virtual questions, simulation, and sharing.

From the Leibniz initiative, scholars Paul Otlet Marie Gislain (1868-

1944) and Henri La Fontaine (1854-1943) used the math for improvements

cataloging processes, developing, Belgium, the *Mundaneum* [12] : a center

record titled Bibliographic Repertory Universal, similar to the concept of

museum. This design resembles contemporary concepts, such as the

Wikipedia and Google, as in 1895 contained a catalog of files and records

film, photographs, audio recordings, newspapers and all kinds of

media available at the time. In 1910 it began the construction of a museum

concentrated all the technology used for communication and information. [13] The

episode demonstrates the proximity of the methods of organization by calculating and

concept of catalog of the exhibition spaces.

Loss Glazier (2002) argues that the institutional success of the library is

directly linked to the fact of maintaining a tension between the external order books

and the inside of the texts. In contrast, the encyclopedia corresponds to utopia

0 / texts / the-architectures-the-museums-contemporary-as-agent-in-system-the-art . Access in: 02/24/2015
10 STOCKER, Gerfried, "In addition to the files," in BEIGUELMAN, Giselle. Possible future: art,

museum and digital files. São Paulo: Peirópolis, 2014, p. 61.
[11] Gottfried Wilhelm Leibniz (1646-1726) was responsible for improving the process of calculation and introduce the concept of multiplication and division by successive additions and subtractions. In 1703, developed by the logical binary system, in which process changed to "1" and "0" as representations concepts: truth and falsehood, on and off, valid and invalid input and output. Available in: http://ecalculo.if.usp.br/historia/leibniz.htm. Accessed: 04/12/2014.
[12] Available in: http://archives.mundaneum.org/en/history .
[13] Available at: < http://www.google.com/culturalinstitute/exhibit/the-origins-of-the-internet-in-europe / QQ-RRh0A. > . Access: 22 December 2014.

an internet in which all content is infinitely connected by network links. He mentions that one of the current problems is that information networks dynamics Encyclopedia overlaps the dynamic library.

Thus, it is argued that the analog exhibition space works partly through the tension between the inner and outer, and as it Sponsor makes intensifies interference between them (inner and outer). The news dynamic interactive spaces approach the concept of encyclopedia in that order is established by the infinity of relationships and processes between man and interface.

Culture and binary technology show affinities, which make up the multi-temporal aspect of the museum, stated by Frieling (2014) about the presence of past, present and future in the museum space. It is proposed the existence of layers time in the museum, the data layers in binary technology, and layers space-time-data in Expository half. Ie the sum of exhibition space and Binary technology comes from the sum of layers of time and information, generating new levels of reality. The nature of the programming is coming up with the museum / exhibition space, for both catalog and exposes information. O programmer develops action codes in the machine, which depart from pre-cataloged library in a kind of museum of virtual shares. While the code carries the history of computing itself (as it is the result of a unique code, modified over the decades), the museum catalogs objects history, art, and commands occur between the institution and the visitor who follows a curatorial proposal, a dynamic visitation.

The computer is the result of the development of mathematics, logic, electronics and computer programming logic, and its origin comes from the Latin *calx* (Marble), also it related to the calculation. Before the 1920s, the computing was associated only to the act of calculating, and the term "machine computer "was used thereafter. The term "computer" appears only in the late 1940s, with established digital systems.

The computer is a body of knowledge consisting of an infrastructure conceptual framework and a technological building where materialize the *hardware* and *software* . The first founded the second that preceded it . The theory of computation has its own independent development, in much of the technology. This theory is based on the definition and

construction of abstract machines, and power of the study of these machines in troubleshooting. ( FONSECA FILHO, 2007, p.13.).

The writings on calculations, systems and computing methods are important to the task solution. Cléuzio Fonseca Filho (2007) reflects on importance of linguistic foundations in computer through examples such as panini, Indian grammarian who in the fifth century BC, formulated the Sanskrit using 3959 rules known as *Ashtadhyāyi*. The early days of computing They are related to the ancient tools like the abacus (invented in Babylon about 2400 BC) in algebra and calculation procedures originally performed with the fingers. From Cléuzio Fonseca Filho (2007), You can trace a history of events that determines the evolution of programming language, the known methods and computer databases today:

| | |
|---|---|
| John Napier (1550-1617) | found the algorithms for use computational and developed a instrument consisting of tables multiplication recorded on bones, facilitating the memorization of multiplication tables (Napier bones). |
| Wilhelm Schickard (1592-1635) | He was responsible for the construction of first calculating machine capable of add, subtract, multiply and divide. Your machine disappeared. |
| Blaise Pascal (1623-1662) | With the disappearance of this machine is considered the inventor of the calculator, built with gears and able to perform only additions and subtractions. |
| Joseph Marie Jacquard (1752-1834) | Almost one hundred years later, mechanical French, he developed a controlled loom |

by punch cards (used method
the first modern computers).
His invention was able to produce fabrics
with complex patterns: in seven years,
eleven thousand looms operated in France. THE
Jacquard machine created by envisioned
the principle of the binary system used to
Today, computers and devices
Digital images.

Table 1 - First computer

The *Arithmomet* , created by Charles Xavier Thomas (1785-1870), is the first
calculator marketed successfully able to perform the four operations
basic arithmetic. Charles Babbage (1792-1871) created the "weaving machine
Numbers "(1837) in an attempt to mechanize the calculation. The biggest difference

this prototype was the existence of a system that made it programmable, for
containing a memory, a central machine, gears and levers used
for data transfer. Babbage is considered the "father of computing"

second Neto Marin (Google Developer) [14] Dr. Herman Hollerith (1860-1929)
contributed the data processing area, it created an electrical machine
based on the separation of punch cards, increasing the working time.
In 1924, his company became *International Business Machines* , or IBM,
one of the most crucial computer companies of the twentieth and twenty-first century.

[14]MARIN, Neto. Lecture on Google developers meeting (November 22, 2014, in
Rebouças convention center in the city of São Paulo).

Figure 1 - *Arithmomet* [15]

According to Fonseca Filho (2007), the term technological Prehistory the primitive interval between analog devices for calculating (especially Leibniz, Pascal, Babbage, Hollerith) until the first computers electromechanical created in the years 1930 to 1940. These inventions depended on programming methods that execute actions within the system. Therefore, programming becomes essential in mechanical and automation computer, early twentieth century:

| Ada Lovelace (1815-1852) | Mathematics, it is popularly known like the first programmer in history and mother of computing. Published on first computer programs (fact unpublished until the 1940s) and tried to concepts such as subroutine (sequence Instructions that can be used multiple times) and *loop* (instruction that allows repetition of a sequence). |
| Alan Turing (1912-1954) | It stands to formalize, along with Alonzo Church (1903-1995), any calculation may be performed by a |

[15] Available at < http://history-computer.com/MechanicalCalculators/19thCentury/Colmar.html >. Accessed: May 24, 2015 ..

| | |
|---|---|
| | algorithm, when run on a computer time and storage enough. |
| Claude E. Shannon (1016 - 2001) | He published in 1937 his master's thesis entitled " *A Symbolic Analysis of Relay and Switching Circuits* " . considered father of information theory, published on concepts able to solve problems logic of electromechanical assemblies. His project involved properties electronic circuits for logic, concept basic of all computers XXI century. His justifying studies areas such as data compression and encryption. |

Table 2 - Great programmers

In 1936, the Z1 comes first electromechanical computer built by German engineer Konrad Zuse (1910-1995), however, its design was denied by the German government, paving the way for the development of a second computer, the Eniac (direct contributors in the German defeat in World War II World). According to Fonseca Filho (2007), computer science had a breakthrough exponentially during the Second World War, the construction period first digital computers.

Figure 2 - Z1 under construction at Conrad's apartment [16]

The computer industry is strengthened in the second half of the twentieth century, with personalities such as Bill Gates (1955-) and Paul Allen (1953-), which developed language *Basic* for the Altair computer, yielding a contract Microsoft and IBM that changed history. The contract granted to Microsoft property of the system, allowing distribution of modified versions System (MS-DOS). In the late 1980s, however, *Apple Computer* is establishes the most successful microcomputer company with the computer Apple II + (present in American schools and residences) and the company *Xerox* [17] , who collaborated with Apple on the launch of the first computer with intuitive graphical interface Lisa. [18] In the years 1990 and 2000 Microsoft and Apple are major companies microcomputer, however, with consolidation projects like Google, the beginning of the second decade of the

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[16] Available at: < http://history-computer.com/ModernComputer/Relays/Zuse.html >. Accessed on: 24 mai, 2015.

[17] The *Xerox* dominated the copier market, and not obsolescer amid the digital world, created in 1970, the *Palo Alto Research Center* (PARC), in order to search solutions computer graphic field: graphical interface and mouse. Steve Jobs (1955 - 2011) developed research for the implementation of the graphical user interface, through advances *Xerox* , on a visit Detailed PARC to three days. Available in: http://www.xerox.com/about-xerox/company-Facts / enus.html . Accessed: 05/26/2014.

[18] Due to Jef Raskin project (1943 - 2005), an expert in human-machine interfaces, was can the Macintosh launch (1984) - first successful computer accessible through icons, windows and mouse. Available in: http: // ecnphlgnajanjnkcmbpancdjoidceilk / https: //www.modelaircraft.org/files/RaskinJef.pdf . Access on: May 26, 2014.

XXI century is marked by several companies that make the user their main

product (user actions are the main source of income and generate new services). As the generations [19] computers advance, the Microcomputer strengthens and exceeds the limit of the *desktop* towards connection between devices. The internet (Table 3) became popular in the 1990s, period in which the information networks are established and advance while web 1.0 - 2.0 - 3.0.

| | |
|---|---|
| web 1.0 | Initial period of the *World Wide Web* . The user action limited and there is a predominance of websites with pages Still, hosted by *ISP-run servers* or sites free, such as Geocities. Its functionality is related to reading and transferring information. |
| web 2.0 | Characterized in mid-2004, it is defined by Terry Flew (2014) as a gateway to personal sites blogs; advertising to participation; a process interactive system based on *tags* and *links* . (Current) |
| web 3.0 | It represents the transition from a "sea" of documents to a "cloud" of data, and even more interactive intelligent. It is the third generation of the Internet in a five to ten years. |
| web 4.0 | *Mobile web* , proposes a new model of interactivity, complete and personalized, adapting to the needs of user. Its operation is through the following functions: 1. the semantic web, supported by the |

[19] There are five generations of computers. The first generation (1945-1959) had valves Electronic large number of wires, slow processing, large steps and high temperature (Need for environments with large cooling capacity). The second generation (1959-1964) was characterized by the presence transistors, lead wires for printed circuits, most speed processing and low cost. The third generation (1964-1970) circuits contained integrated, higher compression, processing speed of microseconds order and are used operating systems. The fourth generation (1970-) achieves an improvement of the existing technology and optimizes the machine to a greater degree of miniaturization and speed in the order nanoseconds. The fifth generation # is the term coined by the Japanese to describe the powerful computers "smart" 1990s Subsequently, the term has come to involve elements of several research areas related to computer intelligence, such as artificial intelligence and natural language. Generation enters a fifth aspect of extreme relevance in the twenty-first century: the connectivity. The industry has worked for your users They could be connected to multiple computers simultaneously. For this reason, companies like Google, Nokia and, above all, Apple in the early twenty-first century, started a working extension to the fourth generation of computers which resulted in the unification of languages and extension functionality. Available in: http://www.fundacaobradesco.org.br/vv-handouts / mic_pag3.htm . Accessed on 12 August 2014.

natural language understanding (NLU) and techniques of *speech-to-text*. *2* by new models of

| web 5.0 | Communication between machines whose network is formed by intelligent agents directly from the cloud, capable of exchange information, to the meeting response most suitable for the user. By using 3- information within the context of the user, such as analysis of emotional and physiological conditions, geolocalizadores, sensors. 4- By applying new models interactivity, customized.  It is planned as *Web Emotional* , whose operation is the emotional interaction between men and machines based on daily habits and Neuro. An example is the project *www.wefeelfine.org* That generates emotional maps of people through facial recognition. |

Table 3 - Potential Web

According Buyya (2013) the beginnings of the Internet are marked by Leonard Kleinrock (1934-) and the ARPANET project [20] , an idea that predates the internet Mobile XXI century. Based on a similar method to the water networks, electricity and telephone, there is a model of utility computing ( *utility computing* ) the consolidated sophisticated computer networks and personal:

> The dawn of cibercriação can be detected in California in 1969. This year saw the formation of the first computer network long distance, the ARPANET, founded by the Defense department United States (DOD) through its *Advanced Research Projects Agency (* ARPA). In October 1969, the firm's technicians *Bolt Beranek and Newman* , based in Boston, connected through telephone lines especially installed two computers separated by hundreds of kilometers, one at UCLA and the other at *Stanford Research Institute* (...) In following year, wrote historians computer Katie Hafner and Metthew Lyon, "the ARPA network was growing at a rate of about one node per month, "and in August 1972 it included twenty-nine knots of U.S. ₍ Wertheim, 1999, p. 164).

it confirms that the construction of an interactive informational and cloud unattended is crucial to establish the collective intelligence and culture of the interface, in an information society subsidized by impulses and energy flows converted to documents, data and relationships.

[20]According to Margaret Wertheim (1999) was the first computer network long distance.

According to research in the field of technology, the improvement of website directs you to the Internet of Things, according to Lemos (2014), is a

informational communication network for connection protocols, followed by algorithms and performances, creating delegations, mediations, ups and stabilizations in machine associations. Ie makes more efficient management of things, people, behaviors and environments in an increasingly process customized in constant connection with autonomous agents.

Figure 3 - ARPANET setup [21]

The autonomy transversely strengthens mobility due to emergence of wireless networks [22] , which facilitate communication and acessibilizam various applications created in recent years.

Contemporary culture is governed by a number of technologies and facilities computer, which potentiate the human action. Contact that the field artistic and cultural are hit by this demand and is replaced by a renewed structure.

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[21] Available at: <( http://archive.computerhistory.org) >. Accessed: June 7, 2014.

[22]  The Computing Model Cloud, as defined and presented today, was only possible due to the natural evolution of computing and the internet. Working Computer Cloud is related to connectivity to mobile devices possible with the use a *cloudlet* . According Bianchini e Silva (2014), this term represents a structural element indispensable in the convergence of Mobile Computing [#] and Cloud Computing, through three layers: mobile <> cloudlet <> cloud. A *cloudlet* , acts as a kind of center data *in box* , facilitating communication between cloud and mobile, enabling that files stored in a device may be synchronized to other devices, making ubiquitous computing.

Propose the concepts of control, obsolescence and inclusion in the processes of both areas (technology and art-culture) knowledge. Beiguelman (2012) It indicates that the culture cybrid [23] temporary self device is characterized by

control, mediated by networks that generate a critical and creative use of media computer.

Observed control both in the art world as computing. Still that today their power is fragmenting, the museum design yet It is linked to the control of knowledge, human records and history. THE computing, in turn, is characterized by numerous protocols and system monitoring, which determine the behavior and the limits of each administrator.

It is argued that there is a system governed by the binary technology, which monitors the Society constantly via mobile devices. However, the system always seems doomed to obsolescence. The computer works with generations increasingly advanced services, which reveals planned obsolescence, which leads to increased consumption of computer products. Obsolescence is Also seen in the artistic field, as the exhibition spaces are opposite behavior remodeling your visitors and their understanding of art history, especially because the company is connected by networks and devices. Traditional dynamics seem to have no effect on the current public museums. Obviously, this system of planned obsolescence affects the exhibition space, which in addition to its structural crisis facing the complexity computer tools, whose functionality is fleeting. Ie treated if the conservation of interactive dynamics, which is shaped proportionally to advancement of binary technology.

Due to the constant overcoming of products and services, if acessibilizam them equipment, facilitating network connectivity. Including 24 starts at when the user has access to computing devices. THE

[23] Term for the inseparable culture between physical and virtual world.
24 In this study the idea of "inclusion" is considered from interactivity where the user is inserted deeper into the computational processes and have greater power interference about half.

informational capillarity means the sharing of data and powers. However, as the neutrality of the discussion at the museum, the design of power in the technological context is controversial because the more are shared

information, there is more interest in the manipulation of powers. issuers

(Sites, groups, communities, servers, television stations, museums, etc.) are

make tools for handling a growing group of users. under

this view, the inclusion becomes a weapon of control, which puts

exhibition spaces in a position again lapse: the more

disseminated the information, the more people will generate and consume data; how much

more data plus the idea musealisation strengthens. Still, the museum

as art space and history loses place to the online experience (Google Art

Project, for example), and at the same time it is handled by the field of technology

to reach the audience that is not interested in expository dynamic web. a

lapse mark the route of these new spaces for art and culture, which assumes

an inclusion when share some of their power through interactivity.

This same inclusive process, the computer appears to result from a

successive reinvention services (new products, applications, websites, etc.) if

the social networks that are constantly being renewed.

> Finally, the multimedia communication will be one of the next ways to communication to be exploited massively for humanity. THE media convergence is a strong tendency observed from the consolidation of the Internet in society, and the convergence of views is the availability of various media users, through an extreme wicking high-speed networks based on optical fibers and wireless networks. These media will support various services such as automation domestic, entertainment, distance education, medicine and the distance e-commerce. These possibilities open up a wide field of development of new applications that will certainly exploit the potential for communication and computing through the intensive multimedia features. (TODESCO, 2006: 07).

Therefore, from this theoretical foundation, supports up demand

considerable applications for exhibition spaces, the networks / interactivity,

reviewing the spatiotemporal relations. Computer science triggers

Digital Revolution and the Information Age, and ensures the emergence of layers

realities constructed in a virtual continuous. There is therefore a new

conception of reality as a sum of the realities of the physical world +

virtual world = Mixed Reality.

2.2 - (S) reality (s) MIXED REALITY

The technologies of Virtual and Mixed Reality become popular from

mobile interfaces, and due to fast servers and wireless internet, the cloud

data is constructed by modifying the flow space for virtual imagery at

interface design and the transformation in the image of nature. The reality is

built parallel to cyberspace and virtual environments, and its

design goes beyond the physical world, it is built for global networks through

communities, a sense of space and particular time. Multiple Realities

They are evidenced by means of Virtual Reality technologies and Reality

Mixed.

The term actually comes from the Latin *realitas,* meaning "thing", "everything

there "and can be understood as" all that is noticeable or not. " The presence

the term "real" in its etymology reflects what is in or out of mind

human (illusion, imagination) though not expressed in the common reality. The real

can be illusory or not, because the illusion is reality itself, and that the

Art work your perception of the real "no art can reproduce reality

in its entirety and we must be aware that there is no objective appropriation

of reality. " [25]

High School (2003), throughout the history of art, we see the construction

various individual and collective realities if neurobiology, whose

findings question the reality as an absolute truth, after all, it is

of what is possible or not to observe, directly linked to levels of perception

human. Couchot (2003) points out that the physical and the virtual union creates a new

nature and greater understanding of the dimensions of the world, time and space,

and consequently, of reality itself. Thus, in this research, it is proposed

I think the reality constantly unfolding the areas of action and

mixed times, marriage derived from the physical world and the virtual. It also indicated a

gradation of awareness of the realities surrounding the current society, ranging

Mixed among the realities and the realities conscious / unconscious.

[25] GRADE, 2003: 27.

The cybrid culture, Beiguelman proposal (2010), reinforces the idea of a

unconscious reality that encompasses all human behavior

Contemporary and its other realities. In it, there is a virtual world and the world

in constant physical state changes, however, there is a collective consciousness

this condition. it defines that this unconscious reality is triggered by

Mixed reality, which makes noticeable the constant exchanges between physical and virtual.

> Interactive media has changed our idea about the image in a multisensory interactive space of experience with a structure time. In a virtual space the parameters of time and space can be modified at will, allowing the space to be used to model and do experiments. ( GRADE, 2003, p. 21).

Figure 4 - Table of Realities (own collection)

In the field of computing, the concept of reality is unfolded

unlike the individual, sensory and artistic realities as their goal

It is to copy and play a physical world through the binary language. It is

simulating idea that, according Couchot (2003), is not a reality

projected on the physical world, but out of it. There is the Virtual Reality and

Mixed Reality that simulate some of the possible realities in the field of

Current computing. "From the Virtual Reality, other concepts emerged

to define other types of environments that are not purely synthetic: a

Augmented Reality, Virtuality Augmented and Mixed Reality ". 26

The term Mixed Reality or mixed reality can be defined as

somatization virtual objects generated by computer with the physical environment,

enabling the connection of physical spaces through objects and virtual environments.

Paul Milgram and Fumio Kishino (1994) define the concept of Mixed Reality

as "anywhere between the extremes of a continuous Virtuality".

Figure 5 - Continuous Virtuality [27]

Cláudio Kirner (2004) confirms that the Mixed Reality allows the user to see,

hear, feel and interact with information and virtual elements inserted in the environment

physical, through some technological device. According to him the Mixed Reality will

besides the Virtual Reality ability to realize the imaginary or simulate,

for the Mixed Reality incorporates virtual elements to the physical environment. Do not

is a purely virtual environment whose dynamic forget the physical world

user, but a believable environment in which the user does not perceive the

difference between virtual and physical objects. It is a scene only, without distinction

elements.

[26]TODESCO, 2006, p.07.
[27]Available at < http://www1.sp.senac.br/ access January 12, 2015.

The Mixed Reality encompasses categories: Augmented Reality and

Augmented Virtuality. The first occurs when virtual objects are placed

in the physical world through tailored interfaces to view and manipulate

virtual objects. The second occurs when physical elements are inserted into

virtual world, through interfaces that carry the user, which allow
view and manipulate physical elements inserted therein:

> Augmented reality and augmented virtuality are particular cases
> Mixed Reality, but generally the term is augmented reality
> It has been used in a broader way. Augmented reality uses
> computational techniques that generate, position and show objects
> virtual into the actual scenery as augmented virtuality uses
> computational techniques to capture real elements and rebuilding them,
> as realistic virtual objects by placing them inside virtual worlds and
> allowing its interaction with the environment. In either case, the
> real-time operating system is an essential condition. THE
> Augmented reality involves four important aspects: rendering
> high quality of the world combined; accurate calibration, involving the
> alignment of virtual in position and orientation within the real world;
> real - time interaction between real and virtual objects. ( Kirner, 201, p.24).

According Kirner (2013) the term Augmented Reality is very confused

with the term Mixed Reality. However, the first makes up the second, and each

which has technical characteristics. The Mixed Reality includes both Reality

Increased as the Virtuality increased, and as Paul Milgram (1994)

borders, can be classified according to its various modes

view:


a) with augmented reality display (not immersive) that overlays virtual objects

in the physical world;

b) with augmented reality (HMD) with direct optical vision ( *see-though* );

c) with augmented reality helmet (HMD) with video camera view

mounted on the helmet;

d) virtuality increased with monitor, overlaying real objects obtained by video

or texture in the virtual world;

e) increased immersive virtual immersive or partially based on

(HMD) or large screens, overlaying real objects obtained by video or

texture in the virtual world;

d) partially enlarged virtual immersive interaction with real objects,

as the hand in the virtual world.


For the operation of the Mixed Reality a tracking is necessary

physical objects, alignment and calibration of somatization on the environment

mixed and interactive three-dimensional. According Kirner (2013), a room
Mixed reality can operate with simultaneous participation of several people in
collaborative processes using specific computer interfaces. That
notion of collaborative Mixed Reality is built on physical and virtual spaces
shared, whose access occurs between multiple users in one place (the
user views and interacts with the real and virtual elements through helmet
with camera and crawlers), or remotely (virtual environments are generated in
shared spaces with virtual objects, interactive). Especially in the field
communication, the Mixed Reality can function as driving processes
and assimilation of knowledge.

Augmented reality combines virtual and physical objects in the physical world
executes in real time. Enables alignment of virtual and physical objects between
itself and, according to Azuma (2001), applies to all the senses, including hearing, touch,
strength and smell. Kirner (2013) characterizes it through the following points:

a) is a particularization of Mixed Reality, when the environment is the main
physical or predominance of the current;
b) is the enrichment of the physical environment with virtual objects using some
technological device, working in real time;
c) is an improvement of the physical world with texts, images and virtual objects generated
computer;
d) the mixture is physical and virtual worlds at some point in
reality / continuous virtuality that connects physical environments to virtual (Paul
Milgran firm that in 1994).

Augmented Reality technology facilitates communication between
humans, between humans and machines, and feeds a series of layers
realities coupled with the common physical reality. It enables field applications

education, training and in the field of art as work or dynamic
institutional / expository. For its execution is required: 1. a physical object
some kind of code / or reference mark, allowing the interpretation by
application, generating the virtual object. 2- camera or capture device, and
transmission of the physical object image so that the *software* is able to

interpret the reference code.

The construction of the virtual object occurs by capturing the physical object

front of a specific device (camera), which interprets and sends images

obtained in real time. According Beiguelman (2013), the use of increasingly common

smart labels based on bar codes with large capacity

information storage, if the QRCode [28] ( *Quick Response Code* )

indicates the gradual commodification process of networks (and at this point, the discussion

on the Internet of Things comes again). QR-Codes are interpreted

by camera phone with specific programs for reading code. Your

main function is the expansion of information and virtual plane data to

physical plane, through the interactive interface.

For the development of Augmented Reality applications are

combined *software* to devices such as digital cameras, *smartphones* , GPS.

There is research indicating that in future it will be possible to expand the display of

monitors to the physical environment, such as windows or surfaces where

programs are executable. According to the field of computing,

operation of Augmented Reality is divided into systems, classified by

*display* used, which can vary in Direct Optical [29] , Video Monitor or [30] and

Projection. [31]

Augmented Virtuality is defined according Kirner (2013) as a

particularization of Mixed Reality when the main environment is virtual or

there is a predominance of the virtual. It is based on the enrichment of the virtual environment

pre-captured or physical elements captured in real time. Ie your

[28] The QRCode was established in 1996 in Japan.
[29] Uses devices - glasses or helmets - as the current image receptors, enabling in real-time, the projection of virtual images in the environment around the interactor.
[30] Uses a *webcam* to capture the physical environment, subsequently mixed with elements Virtual displayed on the monitor or interface.
[31] Uses surfaces own physical environment projection of virtual objects, generating a combination of physical <> virtual front of the interactor.

technical operation is exactly the opposite of Augmented Reality. At the

field of art, numerous works defined as "Virtual Reality" or

"Augmented Reality" are, in fact, Augmented Virtuality, where you can

insert interactive physical objects in the virtual environment. This capture is done through

video sensors or cameras, in real time. Thus, the potential of

Augmented Virtuality is in the simulations of the physical world, manipulated in

real time.

At this point Kirner (2013) explains the specifics of each type of Reality:

| | |
|---|---|
| Virtual Reality (VR): | It is solely in the virtual world. Transfers the user to the virtual environment and prioritizes the features of user interactivity; |
| Mixed Reality / Mixed (RM): | It is between the physical world and the virtual, transiting through the interaction between reality layers. Partition between Augmented Reality and Virtuality increased; |
| Augmented Reality (AR): | It has a mechanism to combine physical world with the virtual world, However, maintaining a sense of presence of the user in the physical world and emphasizes the quality images and interaction user; |
| Augmented virtuality (VA): | It has mechanism to match the world Virtual elements brought to the world physical, which makes the interactivity of user an inserted element in the environment virtual; |

Table 4 - Realities and Virtualities

Beiguelman (2013) understands the success of Augmented Reality due to generated rapprochement between the virtual plane and human perception, confirmed idea

by Pranav Mistry [32] , which points out that the integration of information to objects physical everyday helps in eliminating the gap between the virtual plane and the real plan, and confirm the existence of a single plan that still keeps us humans, but more connected than ever. Thus, it is understood the Mixed Reality as a continuous sum through the device / interface where virtual objects are in addition to the physical environment and vice versa. The above categories

They work with an interactive network system, fixed location without connection Data cloud. With access *wi-fi* and mobile internet (3G / 4G), the application of Mixed Reality can occur via *mobile* and external areas, where space urban.

The determining factor of this type of technology is the construction of a contraction <> Expansion realities, time and space, for it transpires that infinite loop in an interactive and informational network, which changes the perception human. The museum can review your nature through computer technology, especially the Mixed Reality, boosting its share in the process of acquisition and constant subtraction. The antagonism generates a wealth of relations between public <> work <> means, and opens the reflection of the existence of an institution.

Arise specific applications like Aurasma, Layar, SmartReality, Visidraft and Junaio intended to create virtual objects and implementation Reality and Virtuality Augmented, anywhere.

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[32]Available at: <
http://www.ted.com/talks/pranav_mistry_the_thrilling_potential_of_sixthsense_technology?language
= en >. Accessed on: March 2, 2015.

Figure 6 - Expansion Board <> Shrinkage [33]

> In this context, Cloud Computing presents
> as a very viable environment to support the distribution and
> pervasiveness processing and storage. in this
> environment, processing and storage are essential
> related to mobile devices and more complex tasks in
> local and public clouds. ( BIANCHINI and Silva, 2014, p.10).

This research proposes to think the importance of Cloud Computing as

because its implementation, data and images are accessed, shared and

posted on an unprecedented speed. The information and pass this

displacement connectivity exposes a number of interactive actions. THE

Cloud computing is defined by Bianchini e Silva (2014) and mobility

sensors for Mixed Reality applications and interactivity.

According Marin Neto [34] were set to define the three terms

Current interactive market: *Cloud First* , *Mobile First* and *Multi-screen* . These terms

apply the layers of reality, for many of these applications are allocated

in cloud data (storage processing). Mobility is a factor

fundamental to the user, and the term *multi-screen* sets a regime

[33] Source: own collection
[34] MARIN, Neto. November / 2014. GDG FEST- SP - Google Developers Meeting held on November 22, 2014, the Rebouças Convention Center in São Paulo-SP.

marketing and behavioral, as each person connects simultaneously

from many screens.

In Brazil, according to Google [35] , 48% of the population is online, which makes it

4th country in the world in connection. Of these, 20% accessing device via *mobile* and 72%

daily access social networks and the Internet by cell phone. Still, 35% of

users use at least one application to wake up; 59% access your network at

Traffic; 71% navigate the computer at work and 91% of mobile phones in Brazil

They have the Android operating system. As for Android, there

unpublished releases like *Android-Wear* [36] and *Android Auto-* [37] , confirming the

trend devices *wearable* coupled to the body.

It is worth noting that today the digital permeates the various fields of action
human; techniques and data acquisition technologies on
universe, about the culture, society and the individual; computing
itself, the data processing and forms of access
"Tangibilization" information. [38] (HANNS, 2014, p. 267).

The latest releases indicate the multiplication of screens around the user

and the immediate connection. Projects like the *Android-Wear* , allow the user

access your phone without necessarily trigger the interface *smartphone* .

Everything is notified by the smart watch in sync with data, *bluetooth* .

There are many possibilities through binary technology in expanding realities

and physical space, imagery, illusion, created in the human imagination.

Couchot (2003) argues that by simulating the space starts to inhabit a

kind of limbo that is neither physical nor mental, which leads one to believe in a

reformulation of the physical space and the notion of reality.

[35]MARIN, Neto. November / 2014. GDG FEST- SP - Google Developers Meeting held
on November 22, 2014, the Rebouças Convention Center in São Paulo-SP.
[36]Android-Wear- synchronized to Android smartphone, the Wear have clock design and updates
phone notifications in real time. Available in: http://www.android.com/wear/ . Access 08
ten. 2014.
[37]Android-Auto - synchronized to Android smartphone, Auto provides information and
called directly by the car system. Especially the Android-Auto makes you think the
layers of reality at the time it enters mobile content to your fingertips by the system
Internal car. Available in: http://www.android.com/auto/ . Access in Dec 08. 2014
[38] HANNS, Daniela Kutschat, "Data visualization and" tangibilization "Information: A question
cognitive "in BEIGUELMAN, Giselle. Possible future: art, museum and digital files. Sao Paulo:
Peirópolis, 2014: 267.

It is argued this limbo as a potential hole, which can

strengthen as the connectivity generates lapses in sense experience, because

countless realities entail individual and collective experiences, which feed

new relationships between man, space, time, and the very embodiment. If there

many realities, perhaps there are many human notions of space. About the

exhibition space, you have to think the varieties of equipment and technology

that affect your current perception. The *smartwatches* , for example, denote

greater fluidity to the physical and virtual realities, which pass to permeate,

constantly. The Mixed Reality, in turn, can expand relations

built in institutional spaces, exploring the perception capacity and

human relationship with the space around you. The biggest question is what leads

the structuring of the many spatial and temporal modes, based on the intersection of

human consciousness and interactive interface.

## 2.3 - THE (S) SPACE (S) TO THE MEDIA EXHIBITION

> messianic narrative imposes a false confrontation between the end and beginning,
> establishing polarities between printed and digital cultures that
> worth of nonexistent antinomies [...] The logic of the impending new dredge
> not only the past but the present itself, hurling us into a
> strange state of anticipation of a post-future that never comes, but
> which promises to millions and millions of potential global users.
> (BEIGUELMAN, 2003, p. 11).

According Beiguelman, there is a contrast between the print culture

computational, whose present is based on expectations of future

numbed by the binary technology. The logical constant novelty, presented

for it shows the system in the network, which travels between spaces and times. It is

research reinforces critical thinking in computer application in artistic-context

cultural, as it presents a complexity from the subjective, the

sensitive conceptual characteristic of the artistic process and the paradox

a contemporary museum.

Before the presence of the virtual world, the man worked from the plane

physical and developing plans fictional time and space, the mental framework

(imagination). In the contemporary world, are perceived layers of space and

time, which create an inseparable single time the perception of the past and

of future expectations. The hyperconnection and virtuality bring experiences

extra spatial and temporal, that arouse a differentiated human consciousness.

As the binary technology generates intuitive interfaces and close relations with

sensitivity, space is prepared, by contrast, the traditional concept because

expands its limits. This new relationship with space acts on the forms of

exhibition space, and creates own patterns from a connected environment.

According to Gonçalves (2004), in the last quarter of the twentieth century comes an effort theorizing about the exhibits and their role before the public. The exhibition art are designed as a means of communication between the viewer and the space. She It points out that the social imagination extends the spatial boundaries and is a space communicating. From that point on, the exhibition space is faced with a multitude of actions.

From the museums of modern art "establishes a pattern of how should be the appropriate space to the modern [...] the best museum standard is that where apparently there is no interference " 39 , showing that the space exhibition is also directly connected to the corporate identity. Bruce Ferguson (1996) notes that the art of displays can be understood as a vital part cultural industry, for new museums. He points out that the exhibition space It is part of the institutional identity, interfering with the artistic and cultural identity of the time.

Sperling (2012) argues on the array of spatial design of museums, the essence of which must go to a non-geometric contribution, but topological, about the spatial characteristics that are independent of variation formal. He points out that the museum becomes the site of the structural spatial relationships, borders and boundaries, connections, nearby, (dis) continuities, leading to question of the perception of space and not only, of visuality.

The presence of the computing devices in the field of art, remodeling presence in the exhibition space, time, reality, and the condition of authorship

[39]GONÇALVES, 2004, p.53.

(Pertinent question to other periods of art history, but, in this research, is thought from the production in art and technology). The space becomes a driver flows through interactivity and mobility because due to the level involvement offered by the computer interface, there are relations specific space between, and interactor device. Each user has a particular experience, potential, which triggers spaces, times and different realities.

It sustains the existence of latent realities in interactive spaces, making possible an approximation to the theory of parallel worlds or multiple universes 40 of the field of physics, in which there are different versions of a same space-time, which are potential and emerge divergent in their own realities. It is to conceive potential worlds that generate a web possible realities.

> In the simulation, the space is neither physical space where our bathing bodies and circulates our eyes, nor the mental space produced by our brain. It is a particular place without space without substrate material - out of electronic noise, the real good of thousands of micropulsões that run electronic circuits machine - an area without tops on which all dimensions, all the laws of association, displacement, of translations, projections, all topologies, they are theoretically possible: a utopian space. ( COUCHOT, 2003, p.164).

Thus, the bond built between binary technology and physical space is conditioned by interactivity. The space permeated by data can be understood from the exchange of knowledge between user and computer, which Daniela second Kutschat Hanns 41 generates a ubiquitous environment. For her, this environment stimulates cognitive abilities to empathize, recognize and decipher relationships, learn to share.

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40 Some scientists believe that since the position of a particle is determined, the various other locations where it could be divide and create parallel and separate worlds, slightly different from the original. Hugh Everett was the first physicist to propose the possibility of a multiverse, but his theory of "Many Worlds", published in 1950, was not well received by the academic community. The so-called theory of "Many Worlds" was reformulated for "Many Worlds Interactive". Available in:
http: // ecnphlgnajanjnkcmbpancdjoidceilk / http: //www.sbfisica.org.br/rbef/pdf/302307.pdf access January 24th. 2015.
41 HANNS, Daniela Kutschat, "Data visualization and" tangibilization "Information: A question cognitive "in BEIGUELMAN, Giselle. Possible future: art, museum and digital files. Sao Paulo: Peirópolis, 2014: 267.

Johnson (2001) states that the landscape of information is, simultaneously, a technological breakthrough and a work of creativity without above, capable of changing the way the machines are used, and mainly imagined. As Johnson, you see the construction of a This informational and a new concept of space defined by computer rules about the physical world that becomes mixed, like the Mixed reality, the dynamics of which visualizes the exchanges between physical and virtual world.

The concept of space is understood etymologically from the Latin *spatium* and

It means space, place or period of time. Harman (2009) ensures that the space

It is therefore relational and understood as a network because it is a site of

relative and non-relative. From an anthropological point of view "it is a system of

Proximity own human world and therefore dependent on

techniques hereinbefore, languages, cultures, conventions, representations and

human emotions. " [42] According Lèvy (2004), the Earth was the first space

open meaning of our species. The second, the Territory was built from

agricultural and commercial relations in the Neolithic. From the sixteenth century, there

a transformation of the space for commercial developments, the case of large

navigations and territorial conquests in the Americas. The organizational principle of

new space is the flow of energy, raw materials, goods, capital, labor-

work and information:

> The organization of space - all those medieval villages devoutly
> involving their cathedrals - did not imply a specific attitude, just
> He helped create it. This process of imagining the world through
> spatial organization is far from limited to the sacred text of the cathedral
> Gothic. Let us remember how far the Ancient Greece - with its barter
> lively and public debate - embodied the vitality and sociability of
> city-state [...] The way we choose to organize our space
> It reveals an enormous amount about the society we live in - maybe more
> any component of our cultural habits. ( JOHNSON, 2001
> p.52).

This link between space and society demonstrates the direct dependence between

space and time. Lemos (2014) points out that space and time are defined by

relationship between things and changes in objects, which are constantly

affinity with other objects. According to him, to philosophy space is tension

[42] Levy, 2004, p.15.

between a real object and its sensual qualities, through which it (the object)

It becomes accessible. According to physics, spacetime is the system

coordinates used for the study of special relativity and general relativity.

The time and three-dimensional space act as a variety of four

dimensions.

Margaret Wertheim (1999) punctuates types of space (and time)

built between the Middle Ages and the twentieth century: it is a spatial scheme

wider, modified over the centuries. She argues that, until the seventeenth century,

space was not connected to the delimitation of the geometric and physical, in a system

three-dimensional coordinates, but the concept of soul. Due to mathematicians, the space was reestudado under mathematical laws, cosmology case Newtonian, until the concept of cyberspace in the twentieth century.

Wertheim (1999) makes it clear that the space has become complex before relativistic understanding of view, it determines the time Einstein while spatial dimension. In the second half of the twentieth century, there is a transition even more radical, where there is nothing but space. Matter is only coiling space, which becomes the actual total. According to her, there are the following spaces:

| | |
|---|---|
| 1- The space of the soul | Directly linked to religious issues Christian medieval era, which was divided in realms like Hell, Purgatory and Paradise. His description is directly connected with Dante's Divine Comedy works Alighieri, which are represented kingdoms spatially and spaces within the land (Hell), Mountain (Purgatory) space with stars (Paradise); |
| 2- physical space | Described from Giotto's work in Arena Chapel in Padua, where Clearly the transition from the "spiritual space" for the "physical space" itself. She believes that "with this advancing visual technology, the spiritual symbolism Gothic period was eliminated and, for the next five hundred years, the structure |

| | |
|---|---|
| | Western art has so crushing the space of the body " 43 ; |
| The celestial space 3- | Which results from the metaphysical dualism typical of the medieval age, whose construction It was given unlike the notion of terrestrial space. It is a space constant, unlike the earth with their mortal and changing dimensions; |
| The relativistic space 4- | Which converges in a series of discovered, through and Hubble arriving at Einstein. The theory |

| | |
|---|---|
| | relativity led the German physicist build a new vision of space, directly linked to the universe expansion and generating more than theory general relativity, but a "theory space of relativity ", whose design space goes against space Newtonian absolute, and builds on purely relative phenomena; |
| 5- hyperspace | It is the design of a built for more than three dimensions. The fourth and many other dimensions become considered in the fictional field still on nineteenth century, influencing not only the field literary, philosophical and scientific, as artistic, musical and mystical, coming to XX century with a forecast of possible 11 dimensions; |
| 6- Cyberspace | Which refers to the interconnected space computers, the terms "web" and "Network" apply. There is also cyberspace the soul, an analogy between mysticism and computing, in which cyberspace is built in parallel to "heaven." |

Table 5 - Spaces

[43]WERTHEIM, 1999, p.80.

You see the multiplicity of forms of space, history and
human perception. Each historical period leads to a new concept through
religious beliefs or scientific discoveries. This research affirms the
many facets of the space between the physical plane and the virtual. Realize a space
cybrid, mixed, full of interference and flows, seized by the individual as
who becomes aware of the mixed reality around them (regardless of
Application of Mixed Reality technology itself). The space becomes
a flow regime guided by a mixed aesthetic, made up of the physical and
virtual, the individual and collective perception. But, especially in the sensitive field,
the space is given from the imagination, ideas, a plan that precedes
digital simulation.

According to Johnson (2001), art history is marked by spaces
imagistic illusion, created in Europe in different centuries, the case of paintings
walls dating from the end of the Roman Republic, whose elements work to
mimesis and illusion. Degree (2003) explains that the intention to extend the painting to
beyond a single plane, it works as a device to expand the physical space,
creating a virtual refuge: they are space-image that create illusions, which

44 Available at < www.pinterest.com > . Accessed on: January 13, 2015.

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demonstrate an effort to reproduce environments through techniques
characteristics of each period.

Agreeing with Grau, illusion of space to work with impressions
sensory changing according to the movement of the observer and his
ability to focus. Realize a space with psychological, imagistic forms
virtual, which deceives the senses and directs the viewer's behavior.
Grau concludes that these areas represent the beginning of immersive environments
art and technology, which aims to erase the internal distance from the observer through
binary technology. Therefore, the unfolding of space according to the advance
level of involvement of the interactor, engaged in the development of space and time,

the work of art and / or exhibition space, in contemporary times.

Lemos (2014) puts two notions of space, relevant to the twenty-first century: space as an abstract concept and how what are the scope of places, relational and dynamic. The first concept offers space as reservoir of all things, as a mathematical entity (things are contained in a certain spacing). The second puts the space as a network places and objects formed by exchange dynamics. The classification Lemos says the many realities and the design of a larger Unconscious Reality on smaller mixed realities, which are built by flows. The notion of a mathematical and universal space refers to the intangible, inexplicable, immeasurable. O concept of space as a network of places and objects are near human understanding, it is similar to everyday experiences.

These two categories contribute towards the construction space, each Again, built as a means, for directing stimuli and flows in a network infinite connections, dependent on their users. In the field of art, there changes in the spatial exhibition and traditional structure through the use of Binary technology because the space formed by networks and objects (connectivity immediate and mobile) merges the exhibition space. Gradually, networks and objects become more intelligent and autonomous, confirming the construction of a -flow space. In the exhibition spaces, the dynamics are assessed as that interactivity interferes with the exhibition modes. Therefore, in this research, it is understood that the field of art and technology is far from the notion of an observable space only.

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It is obvious that these examples of images of spaces to create illusions
They are not technically comparable to those illusions today made possible by
computer, the user can experience interactively. However,
this study clearly shows how, in every time, efforts
extraordinary were brought together to produce maximum illusion to the
technical means available. ( GRADE, 2003, p.18).

The greater the illusion, the greater the impression that the interactor is immersed in a sensitive context. The XXI century is marked by the space-information, which beginning and end are intangible in an expanded environment through tools that make visible a set of words, images, concepts, and formulas diagrams. Degree (2003) confirms that this space-information install a world

Artificial raising the entire imaged area.

The concept of cyberspace comes with information networks and firm that "the dispossession of the self is the essential aspect that marks the entrance of human in cyberspace. " [45] The content space, which allows the virtual architecture dialogue and expansion of relations is compared to urban planning and presence of a community. Communities are an important aspect in Nowadays construction space, for virtually reproducing mode pre-existing socialization (under new prisms), through a perspective updated presence, space and time. The company sees its space second trend political, cultural and scientific, interfering directly in user network action.

Cyberspace takes the idea of a space whose physical limits are non-existent and / or determined by the technological device. Anne Cauquelin (2006) supports the "real" no "place" to be, because here and there are mixed, there is no distances or borders. However, Lemos (2014) reflects that the seats are in space as places create space. Thus, the place is present, but space falls apart as a territory and physical boundaries, for the world loses its vanishing Point. It is perceived neutrality of the technological device acting on the space, constantly vacillating between their existence and their annihilation:

> Here we are, therefore, with a restatement of the two spatial perspectives and time: time and place for the electronic device, are incorporeal.
> They only take body in certain circumstances and return to their

[45] PESCE, Marc, 1997. Available in http://www.hyperreal.org/~mpesce/caiia.html .

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> neutrality, its indifference, from the moment the occasion -
> a signal or an impulse - is extinguished. ( Cauquelin, 2006, p.162).

Through computer interface can conceptualize space and place, by alternating place and non-place, neutral and non-neutral. Lemos (2014) understands this space as movement environment and network of relationships (and objects places), whose places are the main agents as mediators networks. José Luis de Vicente [46] points out that the computer and its services are produced in spaces occupied by the connection and the industry *software* , whose environments work are laid and *coworking* . Thus, it is clear that all the field of production and consumption of computing affects how space is built in recent decades.

According to Lemos (2014), the media react and produce information georeferenced, which are objects to communicate autonomously with other objects in the network. This fact changes the human relation with space, time and the communication itself, for it is not to take over an entire space virtual, but to look at the physical world touched by interactive devices.

> The space shall not be understood as a reservoir where all things, but as a network, continuously produced by the dynamics of circulation and mediation of things and places. The same can be said of time. It is another dimension of communication of things. Space and time are not absolute, and therefore contingent. are dimensions associations between humans and non-humans, and therefore, relative, uncertain, any, generated in several mediations [...] The space constitutes the spacing between objects and places. Of the same So, the time is not an absolute dimension chronological [...]. If there is no mediation, relationship of one thing with another, no time, no space. They are therefore contingent, as possible and uncertain result the imbroglio between things: the space as arrangement of mediation, time as terms of trade [...] The space would then be a space-network which is composed by the dynamic movement of stocks between places and stuff. ( Lemos, 2014, p.176).

About the exhibition space, Belting (2006) proposes an experience disembodied space in which the place of the museum lies in the experience time visitors, and especially in spatial perception of the individual. THE insertion of binary technology, the dynamics of these spaces, creates another Space condition, here defined as "medium", and similar to the concept of

[46]VICENTE, José Luis, "I Storing: on soscila production dedados" in BEIGUELMAN, Giselle. Possible future: art, museum and digital files. São Paulo: Peirópolis, 2014: 61.

that space-network, according to Lemos, is supported by the circulation dynamics actions between places and things. The medium exists in the open exhibition space interactivity, systematizing the Expository medium, whose operation is by information flows and layers of realities. The concept of Half Expository Results of the potential situations, time and space discussed until the present time of the survey. It is the emergence of interactivity, the mobile and accessibility in the exhibition space, which entails changes in the ways of visitation, communication and involvement with the interactor institutional space and its collection.

If space-network is established for exchanges and circulation, the medium is a way also conductive flows, but proposed in the field of contemporary art

and museology. The Middle Expository transforms the condition of the space, which establishes data exchange and information flows with the interactor through interactivity. The Mixed Reality and mobile computing interfaces intensify the presence of the medium as it is strengthened by interference on traditional concept of space. Thus, the statement ensures greater Lemos reflection on the Expository Middle and makes you think the Internet of Things, which also reinforces the existence of the medium.

With the emergence of mobile technology and connectivity between networks, You notice the presence of the medium as the space so understanding in the field art. In the exhibition space Middle establishes its own cycle networks between the interactor, the artwork and the environment that houses these relationships. Thus, the Expository means functions as a space-flow or space-network, especially, using the Mixed Reality, which ensures a ripple effect of realities time and space, supported by flows in networks. From the point of view of the sum of realities, it is clear, in this investigation, the difference between the Expository Half with Mixed Reality and interactive exhibition space. The first sum the many worlds and realities in a single space and time (insitu <> Influxu).

In the second, the interactor remains in the physical world while the device It allows dialogue with the virtual world (insitu-Influxu), however, there is no sum of these worlds. Resuming physical, here could be assumed that the medium with Mixed Reality approaches the theory of multiple universes conception in that there are many universes can collide, and the interactive space to equate

the many worlds theory [47] , in which the realities do not intersect, but coexist.

To build the concept of Expository Half proposes to understand the fundamental concept of environment. According to the meaning of the word, is the environment in which we live, body or where you spend special phenomena, possibility, through, through, thanks to. These definitions means, therefore, instant connections, unstable, constantly evolving. It is a route path or conductor.

From the issue of space, Lemos (2014) points out the medium as a background, in which the game unfolds company, whose principal agent is the means of electronic communication. Todesco (2006) highlights the discussions of the field

computing on the presence, which define new ways and environments, as the
Binary technology simulates the physical world and the human senses, also thought

as a type of medium. He proposes to classify the middle into two groups

main: means of perception and action means. In the first category

They are:

1- means of natural human perception (set of sensory elements

human body, allowing its use as an interface with the environment).

The 2 means that simulate the human perception (sense simulators

humans, as HMD helmets for virtual reality application).

The means 3 that increase human perception (attached directly to

Mixed Reality applications, which increase certain human senses,

especially those of sight and hearing by merging the information

physical world with the virtual).

4- Non-human perception means (devices that enhance the

[47] One wing of quantum physics has used this theory to reconcile an uncomfortable gap of "Copenhagen interpretation", which is the claim that a phenomenon not observed can be in dual states. The quantum physicist David Deutsch, a theoretical computer scientist Scott Aaronson and physicist Sean Carroll advocate this idea, in which all existence is made up of a quantum superposition of countless universes. In 1995, the quantum physicist Plague Rainer proposed an experimental test in which he describes a procedure for exchanging and energy information "intermundos", or "weak coupling". By using optical equipment quantum standard, a single ion can be isolated from its environment in a trap ions. A measurement of quantum mechanics would then be made with two separate results obtained on another system, which would result in the creation of two parallel worlds. these questions initiated with Double Slit experiment, proposed by Everett (1957). Available in: https://aeon.co/essays/is-the-many-worlds-hypothesis-just-a-fantasy.

human sensitivity, synthetically case of "ray vision x").

In the second category, are:

5 Natural resources (related to the human body such as the hands, gestures,

facial expressions, speech and body movements).

6. The robotic means (allow interactivity in real environments by

robots or mechanical arms).

7. The means of actuation in synthetic environments (pointers / mice, *joysticks* ,

gloves, among others, that allow you to interact with synthetic / virtual environments).

Agreeing with Kay (2007), the medium is able to simulate the details of any other means, including media that does not physically exist, however, It does not consider it a tool, although it can act as many. It's the first metameio with degrees of freedom of representation and expression never before found. Cláudia Gianetti (2006) compares the computer interfaces with means used by humans to communicate, because the role of the interface It is to facilitate the union of different systems. According to her, this process reduces distance and communication time, making space and flexible time to User reactions.

According Couchot (2003) the computational means building a new figure subject, which passes through flows between the physical and the virtual, between the individual and collective. In fact, the interactive computer interface, with the mobility, generates a unprecedented means whose experience differs from most modes building information. Manovich (1998) ensures that the experience and the concept of informational data spaces differs completely from that experienced through other media such as books and movies. Lemos (2014) realize the cultural, economic and cognitive changes related to media computing, which build an intrinsic relationship in which the medium is not an extension but a constitution of man.

Christiane Paul (2003) considers the binary technology as a means of production, presentation and exhibition in the field of art. It states that the medium

computing is distinct because it takes many forms and interactive character, participatory, dynamic and customizable. She considers the computational means so Dynamic about to be modified in real time, and result in complex visual arrangements and abstract communication processes. This abstraction leads to use of binary technology for sensitive purposes, such as classification given by Todesco (2006), to "the means to increase human perception." The reality Mixed is a way of applying technology that expands the sensory capacity and human space.

Therefore, it appears that the progressive insertion of technological solutions computing elevates the role of the media spaces Expository, as it starts to act in expansion of the sensitivity of your visitors, the inclusion of information and realities layers. The transition generates multiple messages natures

spaces with a different level of action whose goal exceeds the exposure and assumes the character of intellectual and cultural construction through interactivity.

Strengthening of computer interface, the devices *mobile* and data storage in the cloud flows, shows the medium as part constituent of the twenty-first century culture, and makes you think the relationship between the subject-object and subject-space. "What sets the subject [...] is exactly the associations with other surfactants. Being subject is being subjected networking, in a "medium." He is [...] expanded by the formation of hybrids. " [48] As the man acts through computing devices, focuses its actions on data streams, because computer is a machine governed by flows of energy, input and output electricity. The Expository Half visitor is a subject refurbished by the process interactive, whose subjectivity is fractal, according to Levy (1999), for the action of computing device is off, and between the individual.

A more complex relationship between the medium and its users, in which the device or interface plays a key role. You can confirm the setting Giorgio Agamben on the device as "anything that has some so the ability to capture, direct, determine, intercept, model, monitor and ensure the gestures, the behaviors, opinions and speeches of beings living " [49] , after the interface that determines the relations of Expository Half

[48] LEMOS, 2014, p.160.
[49] AGAMBEN, 2007, p.40.

redefines social joints, emotional and policies within a given context. Thus, power management is determined by a new organization of human data and emotions.

Comes to be the interactor's medium, which acquires new powers (in counterpart to greater vigilance over their actions) in interactive process with Mixed Reality. This guy acts on the interface and the computer system, and triggers the fragmentation of powers to the institution, the work, the artist and the device. Its action twists time and space, making it responsible for generation (sum) realities. However, it is worth noting that these powers acquired by the interactor are subordinate to the code that governs the machine. however, Recent research on artificial intelligence, autonomous systems and generation codes, idealize a possible future in which interactivity is self manageable and interactor's actions will result in immediate answers and

custom system. However, in any situation, the system monitors the

user and, increasingly, traces patterns of behavior from their actions

networking.

The medium is therefore "product of relationships between things and places

mobility, being formed by different flows and moves between intermediate and

mediators. Departs, therefore, a view of the place as a frozen entity. " [50]

Thus, the medium is governed by flows that create a dynamic data traffic,

insitu <> Influxu, resulting from exchanges between human-machine, physical and virtual, in

exhibition space. This dynamic insitu <> Influxu determines another perception

the physical world, through action called cycles, in this research, as

public cycle <> work <> means, that is transfers between the interactor, the

artwork and Expository Half.

The Mixed Reality and interactivity are ways to transform

human consciousness through the permeability between dimensions, spaces and

times. The presence of many worlds and realities is enhanced in the medium, and it seems

confirm the theories of scientific field that proposes the construction of universes

multiples. However, this process occurs in the interface of microcosm

computational approach and allows the interactor of the many potential realities in

field of art.

[50] LEMOS, 2014, p.200.

## INTERACTIVE ENVIRONMENT 3 EXHIBITION

> Perhaps the most important feature of multimedia is that it captures
> in its domain most cultural expressions in all its
> diversity. His advent is equivalent to the end of separation and even
> distinction between audiovisual media and printed media, popular culture and
> high culture, entertainment and information, education and persuasion.
> All cultural expressions, from the worst to the best, the most elitist to more
> popular, they come together in this digital universe that links, in a supertexto
> gigantic historical, past, present and future manifestations of
> communicative mind. With this, they build a new environment
> symbolic. They make virtuality our reality. ( Castells, 1999, p.458).

The Expository Half is close to the concept of multimedia communication

pointed out by Castells, he is an environment bordered by streams that unite times

and different realities, building a new symbolic means to review the notion of

virtuality and reality. On communication and mediation, Gonçalves (2004)

understand the fundamental communicative character as in the traditional exhibition space.

However, in the medium, communication does not occur in one direction, but if

moving simultaneously between sender and receiver through the media and locative furniture.

The roles are mixed and the powers seem to fragment, because as that dialogue becomes open and interactive, strengthens the establishment of the Environment and a cycle equivalent powers between public works and Half.

In this context, "the mediator is one that modifies and is modified in the course his "communication" [...] The result of the interaction is complete only with the competition its action which he and others turn to the stabilization of the network. " [51] This network consists of various agents that create a continuous stream of data (Public <> work <> means). Its establishment, in accordance with Lemos (2014), reveals the multiplicity of the various connected materials dynamics, where the Mixed Reality technology ensures that while the dynamics of the Middle Exhibition, because it works with layers of times and realities. It potentiates network, reaffirming that "all phenomena are made of these networks that mix symmetrically people and objects, the nature of data and of society. " [52] The flow, in turn, is important in this investigation as it assists in

[51]LEMOS, 2014, p.80.
[52]LEMOS, 2014, p.93.

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understanding of Mixed Reality and contributes to the emergence of medium networks Exhibition.

In this research, it is proposed that the flow exceeds the presence of space and time, building their own pace: the dynamics insitu <> Influxu. This is the Vector permeability between the physical world and the virtual world, conditioned by data flows, strengthened by the Mixed Reality applications.

Figure 8 - between the physical world and the virtual [53]

However, Gabriela Previdelli Orth [54] raises the contrast between the

collections conservation need and the presence of the information flows,

it is expected that the informational environment art work with a number of

readings, able to handle the flow of artistic objects, and yet,

save them. It is observed that the transition *inlocu* to the data field, and vice

versa maintains a lapse of sense a contradiction sustained by Castells of

that "the message of the new kind of society work in a binary mode:

presence / absence in the multimedia communication system. Only the presence in

integrated system permits communicability and socialization of the message. " [55]

The isolation of a message / data contradicts the idea of realities

mixed, and perhaps here lies the great difficulty of traditional institutions: deal

[53] Source: own collection
[54] ORTH, Gabriela Previdello, "Between the contingency and continuity: files in electronic languages", in BEIGUELMAN, Giselle. Possible future: art, museum and digital files. São Paulo: Peirópolis, 2014: 61.
[55] Castells, 1999: 461.

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with dynamic insistu <> Influxu governing contemporary culture, questioning

traditional preservation methods and informational dissemination. The middle

Exhibition coming up with the challenge of maintaining and updating the messages, according to

the technology of this dynamic. The Mixed Reality technology

still have more mediations, beyond the signs or allegories of a period.

Lemos (2014) ensures that the evolution of computational media leads to

Return consecrated experiences where news are placed next to

past experiences, linked to traditional cultural habits (dialogues with the

design of a mixed reality, only in physical and virtual that are

inseparable). The multi-temporal character of the museum, Expository Half integrates

the scene of the exhibition spaces of the twenty-first century, ensuring constant

exchange flows between a present time, imagination and a lot of times

potential realities. The museum, the traditional view, joins a space

exhibition mediated computing technology (Medium).

Realize the dynamic insitu <> Influxu as the Expository Half agent, the which ensures immediate and constant changes, regardless of where the Middle is established. The presence of locative media strengthens the medium, because the higher the mobility, the larger the impact of Mixed Reality. Thus, the flows of various realities governing the dynamic Middle insitu <> Influxu and strengthen multi-temporal identity of the museum.

## 3.1 MULTI-TEMPORALITY THE MIDDLE: FLOWS AND INTERACTIVE

Dealing with Middle multi-temporal matter, means understanding the flow data, relationships, situations, all trampled on interactivity. The process Interactive Expository Half goes beyond the idea of cyberspace and overcomes limitation of the physical world as it is built in a world of mixed space-time.

Cauquelin (2006) defines cyberspace as a space of connections, crossed by streams that carry messages, words, images and sounds in real time. This is not a physical space, in situ, but a means, Influxu of

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exchanges, relationships, information, and experiences visualities. Lèvy (1999) relates the virtual environment to the community, through the flow of social relations. He understands as a meeting place and a means of communication between users. As Cauquelin, it is observed that in the context of art, the work and the interactor relate, also, for flows, which makes the role of key exhibition spaces in the critical discussion of the Mixed Reality. As artists enjoy the interactivity in their favor, more questions are raised about the technological perspective of the century, demonstrating the power of art on collective consciousness.

Frieling (2014) believes that art is not permanent, but a building flows of time, realities and relationships that emerge from the work, in an act temporary. These layers of reality, the consolidation of a Mixed Reality makes you think the transition between the physical world and the virtual world, whose experience is mixed. Its use in the Middle Frontal, settles into data streams, images,

realities and times, resulting in interactivity.

These articulated connections between the Middle mediators via interactors, objects and networks, conditioned by systems and *plug-ins,* which leads to see that there is nothing local or static, but a constant circulation. [56] It is a continuous flow of time that adds new times and realities data.

It is submitted multimodality the medium from the communication system pointed out by Castells (1999), which integrates different media. Thus, the binary system is based on technology and radically changes the space-time, as the location reintegrates across networks in a space of flows which replaces the space of places. The idea of multi-temporality Medium dialogue with the perspective of time off of Castells, for present, past and future can be programmed in the same message.

The flow space provides the information flows and the many realities, structure where the virtual culture. "The speed of the circuit information and modern communications media are setting new

[56] LEMOS, 2014, p. 178.

transits and connections between these cultural sectors once seen in the indulgence of separations ". [57] The essence of the sensitive relations is in the communication flow "That occurs locally, identifying the user's position by offering services attentive to context, requiring the co-presence of users and devices *software* . " [58] It is based on a network of intelligent human mediators and non-human, which create a cycle where the audience determines the pace of the medium.

Johnson (2001) attests to the existence of a trade in and out data and information between machine language and signs of languages human. He said the computer interface is dialog with the agent user, providing interactivity. This exchange process flow follows a order, because, as pointed out Cleomar Rocha (2014), the equivalence of data Machine internal with the external is effected by the execution of the order of code.

The comparison between human mental processing of the data, and

machines shows that interactivity is not a dialogue, indeed. The

interactive systems appear more complex, focusing on human logic and not

the machine. There is an attempt to humanize computer, affirmed by

adoption of cognitive models with natural language and intuitive interfaces.

The more sensitive interactive systems become, the more the user feels

immersed critical point at which is necessary to understand the use of the machine

without that industry and advertising to appropriate the sensitivity / awareness

human.

Jenkins (2014) discloses the connection of culture, which is established by

and the circulation flow (distribution passage to the circulation). The flow not

is only an element of social organization according to Castells (1999)

but the expression of economic, political and symbolic. It is understood that the new

industrial space governing society in the XXI century, for example, is organized

around information flows, able to gather and separate. as for

contemporary society, he declares that the passive file is transformed into

dynamic flows. According to Marta Valentim (2010) flows are directly

[57]Santaella, 2000, p.152.
[58]LEMOS, 2014, p. 202.

related to the structure, culture and organizational communication needed for

interactivity.

it confirms that the flows sustain the momentum of the Middle Expository that

It is trampled in the informational multidirecionamento, among many realities. That

condition extends to the museum / exhibition spaces when adopting solutions

interactive totaling several time frames. In this thesis, the term

insitu designing a physical and static place, and Influxu, a way of streams

informational / relational by computer interface. The sum of the space

physical and networked environment, generates dynamic insitu <> Influxu, key concept of this

research, since it determines the existence of a medium and its Expository

spread: the more networked application, more dynamics will

insitu <> Influxu. This continuous movement strengthens a single space-time, and

shows that the absorption of technologies in institutional spaces establishes

Half of concepts, Mixed Reality and interactivity, in the institutional field.

The notion of museums and their conditions and institutional practices as something
Static has been challenged by artists for decades. It's about time
us - curators, archivists and conservators - also contribute to
include the change in our institutional practices. My proposal
find ways to incorporate the past and future is inherently
related to the idea and practice of museum as a production site
constant and bookie. These two notions have an effect
fundamental practices of acquisition, exhibition and preservation of art. [59]

Incorporate the past to the present, and make it accessible interactively is

a challenge for the Expository Kind of dialogue with works from different periods

history. It is an exercise in adapting the institutions to make your

accessible and updated content. Castells (1999) considers that the means of

computer communication does not differ from traditional cultures, and yes,

absorb. According to him, what characterizes the new communication system by

Binary technology are multiple modes of communication, which have the

ability to cover all cultural expressions.

Lemos (2014) supports the compatibility between traditional cultures and

Binary technology, by comparing the reading experience on *tablets* and *e-readers*,

[59] FRIELING, Rudolf, "Past and future: the museum as a producer and artist" in BEIGUELMAN, Giselle. Possible future: art, museum and digital files. São Paulo: Peirópolis, 2014: 157.

as analogous to reading on paper. However, although the technology strengthens

traditional culture and art models, there are considerable differences in reproduction

an analog experience, interactively. Reading experience

*tablets* , for example, becomes differentiated as the user scrolls the page and controls

content. There is no change pages and reading does not occur in the horizontal and yes,

vertically. You can accentuate, mark interfere on the file and undo these

actions when you want.

As the example of books, the space has its essence magazine,

especially analog, before the interactive models. Interactivity allows

its own nature experience, but can keep relationship with other

historical periods reproducing modes of action prior to its

establishment. Thus, taken up the sum of temporality, as

technological devices connect past, present and future.

The Museum is a multi-temporal space where the past is exposed and

becomes partially present. This, in turn, is built by
dialogue between the other times because it lies in the work of art issues in
perception of the interactor and sustains the future (a potential last species,
because the future perspective is past warranty).

it is argued that each time the visitor builds presence in space
exhibition. The visit to the museum (or other traditional exhibition space) provides
opening time windows, which are in the individual's consciousness. The nature
multi-temporal museum is experienced by each interactor in various rhythms and levels
deep, ranging between individual and collective perception. The gift
visitor is the connection between the many times the moment of observation and
time of the artwork.

With the use of Mixed Reality technologies, multi-temporality
spills, since the museum becomes half and exceeds the presence of the past,
present and future times as parallel [60] connected by the enjoyment
Visitor. Time is to be governed in two initial levels: physical (current) and

[60] It is valid to say that the notion of parallel times exists in various curatorial concepts, the
which establish the relationship between work, time and history. However, in this study the notion of
It is constructed parallel times through Mixed Reality and interactivity.

virtual. They interact with each other, each triggering a number of times
own, related to the interactor's actions.

The (external or internal) network generates a sum of virtual objects on the
physical plane, where there is no target, but the sum. [61]

The Mixed Reality provides a virtual explosion of time on the current,
because its application results in the insertion of virtual objects on the physical world,
mixing times and building a third plane, mixed, bringing together time
current (past, present and future) to virtual time. This third level is deep
and complex as it works on the untying of current and virtual concepts. treated
is mixed time, understood in this research as the resulting time
Expository medium with the use of Mixed Reality. Its main feature is
the mixing of many realities that affect a multiple time.

In interactive spaces there is the presence of mixed techniques,
traditionally known in the field of Art and Technology, such as hybridization,

however, in the hybridization interactivity occurs in parallel between the physical world and virtual. The realities multiply, but they are not each other. THE

Mixed Reality, in turn, goes beyond the hybrid design of the machine computational and mixes, material and conceptual, physical and virtual plans on a inseparable condition. In this case, the planes are not parallel and constitute, simultaneously. Therefore, the binary technology shifts the sense of reality, time and space, subject to instability, because it is not the time clock or the physical territory, but the intermediate time between the conscious and the unaware of the user, the Joint reality.

This reflection is pertinent to consider the role of the current museum. according to the ICOM (2001) and Gonçalves (2004), the museum works with the history, communication

[61]The idea seems to sum rigid within the mathematical concept of "adding" however, Aldous Huxley, in Brave New World (1932), names "sum" as a drug without effects serious side that diminishes human insecurity and dulls the senses. these views allow to unfold the idea of sum through play, and approaches the face of mathematics related to the illusion. In this investigation, one must understand the sum by the many realities, spaces and times generated by MRI. A sum occurs through the layers of reality, which build multiple spaces in the physical world and the virtual in a possible numbness of the ability to distinguish the nature of a given object as virtual or not.

and the public, bringing to light aspects passed through this dynamic, the projection of the future society. However, although the pillars are related to communication and records, the contemporary museum is established through networking and interactivity. If the museum of the past was a time mirror type in which the individual had access to the content without control it today, the museums can be a kind of time travel, which control of actions is directly linked to the interactor. John Weeler [62] , creator of physics term "wormhole", considers the importance of the existence of a flow in a multiply connected space.

Therefore, the twenty-first century museum can take the form of a Medium Exhibition, creating network streams ranging from the outside of the institution, and vice versa. The power lines intend to space and time, and what prevails is a multiple and connected space. Thus, it is justified the presence of natural computer technology in exhibition space.

It is clear that "the material organization of social practices of time

shared work through flow " [63] , and therefore, this research proposes

the existence of the space of flows, characterized by electronic impulses, the

user and the communication centers. It is a support for the processes

computing the current society, in which the dynamic insitu <> is Influxu

inserted, consolidating the exhibition medium.

> The artistic testimonies of cyberculture are works-flow-process works, or even some appropriate works-knowledge storage and storage [...] They are "open works", not only because they allow for a plurality of interpretations, but above all because they are physically welcoming to the active soaking an explorer [...] the more the work exploit the possibilities offered by the interaction, interconnection and by collective creation devices will be more typical of cyberculture [...] and less will be a "work" in the classic sense. ( Levy, 1999, p.147).

Janet Murray (2003) points to immersion as a result of action

computing device on the perception / human sensitivity, in a

meeting of images, text and audio. She points out that the term is metaphorical of immersion

experience of being submerged, and in this sense, it is called as a

[62]Available in: http://www.scientificamerican.com/article/pioneering-physicist-john-wheeler-dies/ . Access on Nov 24. 2014.
[63]Castells, 1999, p.501.

psychological experience of diving in a feeling or impression of reality.

The user feels surrounded by a completely strange reality where

your senses are required. Murray understands the experience, unrealistic

common, as something pleasurable related to the desire, leading to empathy between

individual and interactivity.

This process reveals "many mediators that act differently to

Depending on the content of the device, body practices, built places

[...] This network of actors is developing new reading habits " [64] and immersion.

Greice Antolini Silveira (2011) states that immersion can be exploited by

interactive computer interface, which enhances the feeling of being immersed and

cancels the distance between the interactor and image. It puts the feeling of

immersion, nowadays, generates leakage of physical benchmarks and that "this feeling

You may also be modified from experiments with reality

increased or perhaps the humanization of interfaces. " [65]

Part of this research study exactly how the Mixed Reality

It acts on the construction of the perception of the interactor and how intuitive interfaces and mobile devices, close the naturalness of the technology and corporeality human.

Degree (2003) considers the immersion the key to understanding the media development, because their relations are multifaceted, interrelated, dialectical, contradictory and highly dependent on interator / observer. He It indicates that immersion is characterized by decreased critical distance which is displayed, creating an emotional involvement. Santaella (2004), comprising as a concentration. Johnson (2001) points out that the establishment of binary language raises the level of immersion, because the virtual pictorial spaces expanded space images, interactive and experienced multissensorialmente.

Therefore, the presence of immersion refers to the interaction, which second Lemos (2011) is a new technical mode of interaction of electronic nature and

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[64]LEMOS, 2014: 149.
[65]SILVEIRA, Greice Antolini. Immersion: feeling resized by digital technologies in the art contemporary. Federal University of Santa Maria, in 2011.

computer. Rock (2014) ensures that interactive environments impact the human senses, to make visible the effectiveness of human action on the system interactive. After all, the computer system works with inputs ( *inputs* ) and outputs ( *Outputs* ) that generate new actions by the logical processing. he maintains this system does not respond with a reaction, but with a specific action, making it interactive, logical and semiotic. Santos (2012) states that the interaction is inherent capacity of the human being to act as an observer of an environment Specifically, in the case of the digital environment, it is reciprocal action advocated as interactivity, where the environment is considered as a space and a time surrounding an event.

Degree (2003) puts interactivity as the position of the front of the interactor half, their action and the transmitted content. He points out that interactivity helps shape the experience of the interactor, defining the level of participation and inclusion. Orth (2014) points out that the interactive processes in works of art exhibit Different relationships between human and machine, and machine and human humans. She points out that interactivity expands the possibilities

communication, extending the human senses and the relationship between artist and public.

According to Frank Popper (1993), interactivity in artistic and cultural projects generates human social networks, which are established in flows move between man and machine. In this regard, Orth (2014) points out that the flow of informational environments art is evidenced by the validation interactive and distributive processes, operating in open source, activating relations between its agents. Michael Rush (2006) attests that art is not limited more to the notion of object, because, by the binary technology, covers a universe interactive (he proposes a design similar to the Expository medium to state that this interactive art world can be virtual in its reality and radically interdependent the visitor incorporation). Santos (2012) advocates experience of the presence generated by interactivity, whose concept appears in the field information technology and communication, while the design of interaction, older and wider, it concerns the mutual relations between two or more beings or factors, and arises in physics.

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In accordance with these different concepts means interactivity as a connection between times, worlds and spaces through Mixed Reality and computer interface, contributing to the construction of a single perception, called mixed time. The interactivity allows the association between physical world and virtual, and from the Mixed Reality, enables the interactor's experience times and mixed spaces. Thus, it is the relation between the user and the computer system (either the interface level or the code itself) increasingly adapted to the human body and the gestures, propagating data through objects and people.

According to Lemos (2014), sensors smart labels, reality increased collaborative maps, objects connected to the Internet, recognition facial and vocal, smart cameras and a series of devices, connect the world of things and objects to human, through information networks. "These technologies that extend the "communication of things" and multiplying forms of mediation and delegation between human and nonhuman, featuring contemporary cyberculture " [66] and strengthen the Mixed Reality. Its shape can range from local audio guides, applications and cloud applications to programming

tools like *GoogleGlass* , *tablets* and projectors.

The resulting interactivity of Mixed Reality depends directly on the existence of locative media and mobile computing devices in time real. Its application in Expository medium enables the inclusion of content interactive, in which the interactor is approaching the curatorial concepts, exhibition and institutional. Interactivity in half may be related to mobility and geolocation devices, as well as the character "hyperlocal", appointed by

Lemos (2014), for computational media consumption and provide distributing information attached to the concept of hyperlocal, expanding old and new places, dynamic emerging on the design of these places. "treat-

also, and increasingly, processes "territorializantes" with boundaries concrete space modes of production. " [67] deconstruction of the concept of

[66]LEMOS, 2014, p.176.
[67]LEMOS, 2014, p.178.

physical space, in contrast to the global trend geolocation, discusses the condition of the displacement space, in the context of the exhibition medium through new spatial dynamics emerging mobile and locative devices. They represent a growing trend in computer interface, including *wearables* , which provide a continuous interactivity.

This research classifies interactivity in their half second Expository origin through the work of art / collection or medium itself:

**Interactivity via work** arises when the Mixed Reality technology is applied in work of art or collection. The work is interactive and interferes directly on the Half Exhibition space and architecture. With the Mixed Reality technology the artwork insert virtual objects on the local physical architecture by modifying the structure by adding layers of reality, because it is the (a) architecture *software* of the work + (b) = physical architecture (c) setting the medium with a new collection. The origin of interactivity in this case is the work of art, the case of applications in digital interfaces as *caves* immersive, interactive installations, applications, works with *Kinect* , or presence sensors. Interactivity via the work of the work of art for Half

Exhibition, which becomes partially interactive, because their dynamic is insitu <> Influxu the From the work of art interactive structure.

**The interactivity via the medium** arises when the interactive process is applied directly, the dynamics of Expository Half, which interferes with the works (whether a collection analog or interactive). This is an interactive environment, but not necessarily provided with an interactive collection. The use of Mixed Reality near the public because the interactor acts on the space, through the use of interface computational, that changes the environment and works in real time. The nature the works is demystified and becomes interactive. So interactivity via Half of Half of Expository for the works and the collection (these partly interactive because Half dependent interactivity).

According Falkheimer and Jansson (2006), the popularity of phones mobile and location services, it makes the living society a reality of *the sense of place* [68] where the place is overrun by mass communication and the flow, generating a new sense of place, presence, space, time and reality. IT IS through this level of involvement that certain technologies are fixed in culture, promoting specific changes in history, and highlighting certain computer interface.

The Middle Expository depends directly interface and brings two concepts fundamental to understanding: a dynamic insitu <> Influxu and the cycle public <> work <> means. Both concepts represent a series of exchanges in which computer interface works with Mixed Reality technology. dynamic insitu <> Influxu is activated by the interactor, which acts on the interface, determining the Half proportions and triggering a cycle of powers between public work Art and Environment Lectures.

3.2 INTERFACE COMPUTER DYNAMICS IN INSITU <> Influxu:
PUBLIC <> WORK <> MEDIA

The concept situ, "in place", has etymology from the Latin. The term is used in archeology, architecture, astronomy, biology, chemistry. In the field of computing, is an operation without interruption state

normal system. The concept is derived from English Influxu *influx* , which means influx, current, flow or act of driving something, intrusion or introduction, import abundance. Within a network, flows have no distance

specific, however, through them to realize the relation of cyberspace with the information flows in the construction of the dynamic insitu <> Influxu which supports the Expository Half. It is noticed that the Lectures Half exists flows data in a multi-temporal condition, dependent on the presence of

[68]Meyrowitz 1985.

computer interface, because it governs the relations of the public cycle <> work <> means [69] , conditioned by dynamic insitu <> Influxu.

Dynamic insitu <> Influxu is based on physical space (understood as a Dynamic insitu) + virtual (dynamic Influxu, whose structure is totally gives in cyberspace), and its essence is in the transmission of information flows in endless cycles of action and reaction.

Half an expository works between the physical and the virtual and creates mixed time determined by dynamic insitu <> Influxu, existing under the presence of two or more realities, interactivity and application of Mixed Reality. it effective Expository the medium, which can be applied to many areas. Expository means may appear in museums, art galleries, outdoor cultural spaces, proposals traveling, among others. Segment is the medium while operating in the environment institutional, in the urban environment and in mobile condition:

**Expository through the institutional environment:** application of dynamic insitu <> Influxu in institutional exhibition environments such as museums, cultural centers and art galleries. The interaction occurs at a specific environment by Mixed Reality, which It uses a network of local server or *wi-fi* . The public cycle <> work <> medium is delimited

Half way through the inserts in place. In most cases, it has as reference

Read codes installed within the institutional environment or the structure itself

and architectural works, which act as references for Reality applications

Mixed.

**Expository means in the urban environment:** dynamic insitu <> Influxu the urban environment. THE

interactivity occurs in an open place, where the Mixed Reality is applied from

GPS, mobile networks and servers available. The public cycle <> work <> medium is built

in an open environment and allows a partially collective experience. Generally,

application has reference in urban architectural lines or location via GPS,

[69]This one concept converses with O system
Artist <> work <> viewer / participant / interactor <> surroundings <> context, pointed out by Nara Cristina
Santos (2007), as problemarização element of transdisciplinary research in production
art and digital technology on contemporary art, contributing to resize the field of
history art .

keeping the Middle linked with geolocation and locative media.

**Half Expository Mobile:** Dynamic insitu <> Influxu with mobile character by

Mixed Reality. It is not necessarily linked to the urban environment or

institutional, and can be applied in sparsely populated places, be offset

constant, using connections and own servers. The public cycle <> work <> means is

related to the application of motion character, which can be anywhere

together with codes and servers.

The cycle is meant a period of time which ends when

returns to its beginning. It is a sequence of steps, a number of

periodic characteristics and a group of second phenomena which recur

a particular order. The origin of the word is Latin, *cyclos* . In physics, the cycle is

a wave determined by a shortest distance, with the shortest distance existing

before this same wave play. The public cycle <> work <> medium is

understood by the trade generated by interaction between public works

art and means, reciprocally. According to the physics concept (lower

distance of a wave), and renews the cycle can be thought of as the lowest

distance between each of the elements (public works and medium) is constantly

approach.

The interactivity classification, presented above, facilitates understanding of the proposed cycle. The interactivity via the work medium becomes partially interactive through interactive works. Interactivity via medium has a environment with computing devices that make your part collection interactive. In both cases, the audience acts as interactor. The cycle public <> work <> means adopts a continuous flow of exchanges between the visitor, which a determining exhibition of the system, the work (wholly or partially Interactive) and the medium (wholly or partially interactive). The active element in both cases, the user is.

The existence of this relationship cycle occurs through the interface, which translates interactor's actions in the system, interfering with the medium. In a sense, the computer interface is an initial window to open the many realities, successively, while the iterative process is active.

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Rock (2014) presents concepts of computer interface and brings a reflection on their use from the system and the user. In a way approximate is the design of endogenous and exogenous interactivity respectively treated by Couchot (2003). After all, the type of interface ensures a certain way of interactivity and the result is the establishment of a dynamic (insitu <> Influxu) and a cycle of actions (public <> work <> means). In the case of Mixed Reality, It considers the role of the computer interface and its application in the processes communicational, educational and informative Expository Half, modeling the way how the public relates to the work and its surroundings.

It is understood that the technological environment in the context of Expository Half generates meaning the user through the deployed realities. Also ensures articulation between art and binary technology, with several transdisciplinary Knowledge areas. In this sense, strengthening the culture of participation immersive puts the use of Mixed Reality as a refreshing perspective to the space.

You can see the influence of binary technology on the field of art, especially in contemporary production and exhibition spaces, as it sensitizes and inserts the individual. "The essence of the viewer is no longer the object,

in itself, but the dramatic confrontation with a perceptual situation " [70] , whose interactive process is sensitive and dependent on the interface, able to link the computing the sensitivity of the individual stimuli.

According to Johnson (2001), metaformas the virtual environment and the mapping *bits* occupy facets of contemporary society. this form remains despite several appearances transiting between the medium and the message, whose transition zone is the interface. Gianetti (2006) thinks the interface as an intermediary and translator between symbolic language and numerical, that brings man closer to the machine and facilitates the way the handles. "Compound the Latin prefix *inter* (between the medium) and the radical Latin *face* (surface, face), the term interface, taken by its etymological says what is

[70]COUCHOT, 2003 p.13.

between two faces. " [71] In order to deepen the term "interface" is to understand the how the computer thinks, in streams, because the data is processed in flows, for outputs and electrical inputs.

Are circuits that process information in the device computer which interprets every word through impulses, meaning the on (1) and off (0). The interface as a tool or graphics solution, is proportional to the simplicity of the equipment to which it belongs, for the more Basic function of a computer, its most primitive interface.

Agamben (2009) considers the devices machinery of government, which can be analog and complete subjectivity cycle, or modern-day (internet, television, surveillance devices, etc.) where it is no longer possible to verify the producing a real subject, but a reciprocal differentiation between subjectivity and desubjectivation. It is submitted, once again, the idea of time / the hole inconsistency of technology issues in the sensitive field (possibly resuming the idea of limbo pointed out in the previous chapter by Couchot), after all, opposition of subjectivity-desubjectivation meets the trend progressively interactive spaces.

The territory that we see through the zoom window in our new vehicle is not the usual landscape of plains, trees and oceans, but a

> information landscape whose marcos são words, numbers, graphics,
> images, concepts, paragraphs, reasoning, formulas, diagrams, evidence,
> bodies of literature and critical schools [...]. This landscape of information
> It was at once a technological breakthrough and a work of creativity
> deep. We changed the way we use our machines, but changed
> also the way we imagine [...]. The interface has changed the way
> we use computers, and will continue to change it in the years
> come. But it is bound to change other areas of experience
> contemporary of the most unlikely ways more unpredictable.
> (Johnson, 2001, p.35).

Interface definitions permeate the idea of transfer medium or

place of metaphor as Brenda Laurel (1993) and Santaella (2013) claim. Lèvy

(1999) confirms the notion of apparatus between the digital world and the physical. Gianetti (2002)

proposes a converter that allows connection and Peter Weibel (1996) underlies the

World interfaces in a broader sense. "[I] n a generic sense and

[71]ROCHA, 2014, p.18.

technician interface is defined as environments that allow two or more

mutual systems to adapt. " [72]

Johnson (2001) defines the interface in its simplest sense, while

a term referring to *software* that formalize interactivity. He understands

as a sensitive translator, whose nature is semantic, making computers

literary machines. Therefore, in this research, it is considered a link interface

enables the many realities, their layers and splits, in a relationship

gradually symbiotic man with the computer.

Resuming the segmentation of the interface from the system and the user,

It can be considered, from Rocha (2014), that the first mechanism includes

dialog between systems, and the second is the dialogue between device and user.

It also features the physical interface [73], perceptual [74] and cognitive. [75] Degree (2003)

says that the exchange between man and machine can take many forms, as the

interface rules depend on its use, the world of illusion and the senses

particular human. The "Rourke (2011) reflects on the interactive works, which

build their temporal development through the interface:

> Even if the device can not be summed up as the work he is
> a non-negligible component of the experience. A part of the interface
> is fixed, another depends on choices, and another is still open at random from
> material handling ( *bugs* , system incompatibility etc.

Dynamic insitu <> Influxu results from sidewalks changing realities in

existence of computer interface used by interactor is applied to the

work and Half. The question again arises of time through the interface because it

It is key in building the medium, and how it operates in space generates

modalities in changing space-time.

Computational interfaces *Mobile* , for example, make the furniture

awareness of the human senses for smaller devices, case

[72]SANT Aella, 2013, p.56.
[73]They are the first interface models, characterized by the user's physical drive.
[74]Input or output data in human-system interface, the case of graphical interfaces that exploit the human senses, giving priority to output system information.
[75]With increased automation, they are triggered by the presence, user behavior, independently of the physical-motor action.

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*smartphones* and *wearables* . According to Bianchini and Silva (2014), the application of

Mixed Reality moves the movable sensors, allowing applications in space

urban or constant displacement. In this regard, can be considered regarding the

layers of reality and levels of interactivity, resuming rankings

computer interface Rocha (2014): the physical interface creates a relationship

perception of the interface because its mechanics is essential to the functioning of

system (you know that you need to press the keypad keys, and has

consciousness of the present time and the virtual time).

In perceptive interface, the user works with less movements and

a visual sensitivity, as through the GUI communicates with the

machine, and many times, immersed in the navigation (the user can act

intuitively, and its space and time begin to be distorted). The interface

cognitive promotes a more symbiotic relationship because the interface drive

It occurs by the interactor presence and not necessarily by their conscious action

(His movements are captured and the interface works without needing one

identify the mechanism. Time and space begin to unfold beyond

interactor awareness).

In the case of *displays* Mixed Reality, you can see a dynamic

specific interface, as in the case of the *display* optical there is an attempt to mix the

physical reality to virtual, with a device coupled to the human eye (yet thus, there is the presence of the equipment). The monitor requires a series of actions and User awareness of the functioning of the system, dividing the perception the reality of the physical world and the virtual, in addition to the need for action consented on the equipment. The projection provides a disconnect the presence the "bound object" because it works through devices like the *Kinect* , which They perceive human movements by their sensors and carrying them to the virtual environment.

These technical examples reinforce the emergence of a dynamic interactive Fleishmann perceived by Monika and Wolfgang Strauss [76] . They point to the creation of

76 Strauss, Monika; FELISHMANN, Wolfgang, "Finding instead of searching: the digital file location as machine "in BEIGUELMAN, Giselle. Possible future: art, museum and archives Digital images. São Paulo: Peirópolis, 2014, p 175.

a kind of unfocused knowledge through computer interface, thanks to reducing the complexity of interactivity. According Beat Wyss (2005), as well like interface and interactivity, the picture is different in the artistic application and science, for the first acquires communication character and the second operational. "When artists disrupt operations and transport the audience that comprises aesthetically operating images are available to the communication". [77] The Middle Expository, able to work in information flows, exemplifies the displacement pointed out by Wyss, where the subject comprises computer applications in the field of art, and creates relations and communications only.

Thus, it is observed that the interface is directly related to active role in the Middle interactor. The public cycle <> work <> means brings the reflection of under control, obsolescence and inclusion, for the interface works at building powers. The possible passage of a culture responsive to interactive, allows consider control of the game between man and machine, especially in the field art.

The interactor may be Central Agent Half, however, his actions depend on the understanding of the computer interface, it is necessary prior knowledge of the equipment even if their operation is intuitive. Also, the action of the interactor is limited by the machine programmed to follow

code boundaries.

Under exhibition, it proposes to think that there is a tension between interactor, the interface and the institution. The interactor handling the device computer, but equipment limits its action by scheduling and functionality set in binary. Applied in an institution cultural, for example, the interface plays with visitor control, which owns part the powers of the exhibition space. While half the exhibition space share with you some of their power and control over the curatorship. At the

[77]Beat Wyss in an interview with Tim Otto Roth, February 19, 2005. Available at: < http: //www.imachination.cnet/next100/reactive/wyss/index/htm >. Accessed on May 31, 2014.

If the realities generated by Mixed Reality, are constructed by the individual in its own access time.

The exposure WeARinMoMA [78]          (Performed with Reality application Increased at MoMA, in October 2010), addresses this voltage powers because viewing of the works depends exclusively on the interactor and was unknown for the management of MoMA, as the exhibition was mounted, clandestinely, without the Museum's consent. Social networks allowed mass dissemination of the show, which was acquired by the organization as part of the permanent collection.

It is noticed that the public and the work build a set of control because the partially interactive artwork [79] is conditioned upon Lectures medium. At the case of interactive work of art [80] , is subject to the control system computer that governs (the code limits) and their existence is linked to user action. The way the artworks are perceived is modified as an application Mixed Reality does not expose only, but conditions the existence the work by interactivity. The example of WeARinMoMA confirms that exposure only exists in the eyes of the interactor through its action on the interface. The relationship Control comes from the public that acts in the Middle, and by diluting the power of the institution, to allow the interactor is part of the process legitimation.

Thus, the medium is controlled by the computer interface because it determining the limits of interactivity. The Mixed Reality modifies the nature of the space and reality, in Expository Half, by adding realities.

It is noted that the power of the interactor is displaced by the interactivity within the medium Frontal, tensions through the public cycle <> work <> means.

In a computational art space, the works have mechanisms displacing interactive nature (interactive) to the exhibition space. O Expository means is the last to be transmitted to the interactivity, since the process starts

[78]Specifically addressed in chapter 3 of this thesis.
[79]Interactivity via Media.
[80]Interactivity via Work.

with the user acting on the interface, which drives the work, and finally, acts on the Middle. exhibition spaces (traditional / contemporary) who adopt a interactive visitation dynamic reach acquis and the public without necessarily expose digital.

The National Museum of Krakow developed a revitalization campaign the dynamics of visiting their galleries through Augmented Reality. THE action, called *Secrets Behind Paintings* , allowed the visitor to become interactor on an analog and conservative collection. The situation shifts interactivity of the medium for the works, and consequently to the public, and institution offers an affordable visitation mode.

The power of concentration process discusses obsolescence. the cycle public <> work <> means, obsolescence is perceived at levels: the first is the computer system that governs the cycle, because the technology used is hostage planned obsolescence, which requires constant updating. The second level It occurs from the relationship with the public, for the Expository Half has to build interactive and dynamic current due to the omnipotence of the individual. The third level refers to the obsolescence of Expository information Half due to omniscient character interactor, strengthened by the internet and by mobile devices. According to Castells (1999), the connections that link the networks represent privileged instruments of power and this determines that the connectors are

holders of power in socio-cultural, current processes.

There is an obsolescence of the Middle information, which may be the solution creating collaborative dynamics with the interactor, able to contribute to the updating and dissemination of information. The three levels are obsolete summarize the simplification of the omnipotence of the institutions, in balance with the power the public and the artist.

The term inclusion has considerable importance for understanding the developments in the medium. These are the inclusive actions through technology, that favor the interactor and the artist, and result of control and obsolescence, triggering the sharing of powers. Inclusion can occur with visitor, passing the act on the medium in colaborativity with information and

activities, and the artist, who through institutional openness to languages interactive, participating in exhibitions and collections. She effective cycle public <> work <> means. The inclusion of binary technology in the traditional space display updates its nature to the approach of contemporary culture. The work of Art works the notion of inclusion when using binary technology to their advantage, generating dynamic shared network, in which interferes with the interactor work of art.

All these modes of inclusion of binary technology in the Middle affirm the issue of fragmentation of institutional power. This is not a cancellation, but how the functions are redistributed. In the examples given, the spaces house interactive dynamics, although they (WeARinMoMA) are unknown by the management. The absolute power over curatorial works is divided between audience and artist. The Museum of Krakow shows the opening institutional and closer ties between the museum and contemporary society.

As Castells (1999), it sustains the idea that the inclusion occurs with most cultural expressions in the communication system based on production, distribution and exchange of binary signals, contributing to the socio-cultural processes. He argues that the inclusion or exclusion, and architecture the relationship between networks, configure processes characteristic of the culture of XXI century.

However, the public cycle <> work <> means shows the dazzle
human with binary technology because its use should be planned so that the Middle
The exhibition becomes an interactive environment without spoiling the acquis and nature
institutional goals. The misuse of interactivity within
Exposure can lead to some functional outcomes, an empty implementation
resulting from the misuse of computer tools or application
disorderly an interactive system whose dynamics becomes incoherent.

Therefore, the exhibition space (analog or digital) works with
human wonder, and is strengthened through the imagination, desires and
building a multi-temporal magical setting. It is a space where the
time can be supposedly molded to the visitor's desire. There is a desire to

capture the moment that begins in own works and ends in the individual, and is
related to the other power desires that pass by the desire to be in
museum of renowned works and have them for you.

In this sense, binary technology and exhibition space seem again
complete is therefore sustain a collective fantasy by building
many times. The exchanges between public, work and enrich this relationship through
(Binary technology and exhibition space) and state the importance of the interface. O
Expository means shown an area without frontiers in which many bonds are
built by Mixed Reality technology. Dynamic insitu <> Influxu,
that represents the permanent connection between physical and virtual, enriches relationships
the middle one.

They observe projects around the world working Reality tools
Mixed and consolidate the public cycle <> work <> means. There seems to be interest from
researchers and artists in producing tools Mixed Reality, and own
public, interested in the highly interactive and playful nature of the applications. In between
large companies, the project *Cardboard* (Google) stands out as one
newly released product, which acessibiliza Virtuality and Augmented Reality. O
Group Augmented Reality, Manifest.AR, is a collective of artists
developing interactive works with Mixed Reality, the world, shaping
exhibition spaces and urban environments, in protest mode.

There are also academic research, case study Informatics Core

Health (UNIFESP), which is dedicated to developing solutions in Reality

Virtual and Augmented and experimental design ART [in] Muzz 81 (PPGART / UFSM)

development in the first half of 2014, to bring up discussions

on Mixed Reality and mobility in the exhibition context.

81 Available in: http://www.artinmuzz.wordpress.com

3.3 EXAMPLES OF SOLUTIONS TO MEDIA RM exhibition: DO

*CARDBOARD* THE ART [IN] muzz

It is perceived hegemony in the field of art and binary technology. O

artistic field is governed by power groups articulate their interests,

artists, works and values in the same way that in the field of computing, groups

like Google and Facebook represents the ruling class in (partially

democratic) cyberculture. It is argued that the more users feel

free, plus the service providers take control. Big ones

interactive projects enable accessibility, but in return the watch

society.

The Mixed Reality appears on the shaft of the interests of these sectors through

groups and projects that develop various types of application and Reality

the Augmented Virtuality. The projects described in this subchapter depart from their

relationship with the institutional environment because it is not intended to map initiatives

Mixed Reality, the world, but point out some projects that have been made to

exhibition spaces. The interest of this research is the transition from space

for medium, through Mixed Reality. The initiatives presented here denote

importance of working the malleability of space, time and sensitivity

human. The applications of Mixed Reality are increasingly complex,

prioritizing personalized experiences.

Research shows Mixed Reality projects that consolidate
Expository interactive media, whose dynamic insitu <> Influxu enriches the cycle
public <> work <>, into institutional and urban environments. different
Mixed Reality applications in the field of art, determine the classification of
its use. When implemented through the action of artists, acts as a work of
art and modifies the environment of your application.

It appears that the projects of this subchapter point the probable lines
Dynamic voltage insitu <> Influxu as accessibility-control, local-global,
individual-collective, and leverage possible categories for understanding the use of
Mixed Reality in the artistic field, scored in chapter 3. It is observed that the

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private and public initiatives to implement the Mixed Reality, discuss
structural review on cultural institution, and confirm the Expository half. According
with José do Nascimento Junior, former president of the Brazilian Institute of Museums,
in Brazil interactivity is in works of art or interactive proposals
temporary, but not permanent exhibition dynamics applied to
institutional structures. The closest thing to an interactive environment, he said, is
the Portuguese Language Museum ( www.museudalinguaportuguesa.org.br ) and the Museum
Football ( www.museudofutebol.org.br ) . It also highlights the Pele Museum, whose
interactive structure project was reduced, and the Museum of the Person
( Www.museudapessoa.net ) , one of the few national nature museums
completely virtual, with a collection, visitation and dynamic online.

Belting (2006) states that there is a public pressure that seeks to
museums that which can not find in books and in this sense the museums not
They are able to meet the demands of his visitor, which is why there
alternating exhibitions and a controversial programming. The new schedules
They include interactive activities and a reshuffle in thinking the acquis
against the anachronistic time digital.

Although few museums / exhibition spaces use systems
Mixed Reality / Virtual, there are companies interested in generating tools
this type for the cultural field. Including Google, whose strategy is to
customization. While using the customer as product works in generating
tools to individualize needs. It is observed how

the user interacts network. Concerning the application of binary technology in the field of art, there is research on large and small companies, which reinforce the interest by computational solutions for different profiles of exhibition spaces. THE building applications that solve institutional problems and exhibition, extends the customization possibilities for the artist, the space and the audience.

Google Internet giant's history shows us that its enormous success from the start was due, on the one hand, a good algorithm, page-ranking algorithm, and on the other hand, to take into consideration what users find interesting. Soon, they already

They were outsourcing much of its expertise to the public, communities. [82] (BEIGUELMAN, 2014, p. 61).

Google is consolidated in the artistic and cultural field with the provision of specific tools and the inauguration of the *Google Cultural Institute* . Created on 2011, is located in Paris, France, and has 25 engineers, whose goal is to create technological solutions to artists, museums and partner institutions. Has an experimental laboratory, since December 2013, which functions as a place of debates and meetings for research in the field of art. It's made of By studio, experimentation room, 3D printers, laser cutters, plus a residency program. The main objective of this project is to democratization of the cultural treasures of mankind.

It is an open institution to the ideas of artists, curators and researchers, promoting the meeting between art and technology. Next to services the *Google Art Project* and *Open Gallery* , Google launches a unique project developed by French developer David Coz, which leads to the Mixed Reality and Virtual to a new level of popularity, inclusion and experimentation: the *Cardboard* . The project is non-profit and makes the experience in Reality Mixed / Virtual Reality accessible via a *smartphone* (Android), the application Free " *Cardboard* " and a cardboard box (especially developed by David, for the user to engage your cell structure and interact). *Cardboard* is a cardboard box that transforms a cell in an interactive / immersive device. Tours are possible for locations worldwide, museums, exhibitions.

Made of cardboard, the *gadget* has two plastic lenses and a rubber band to

holding an *Android smartphone*. Orientation sensors and vibration
phone allow to follow the movements of the head, and a magnet on the side
the box serves as a button to select the seven experiments
augmented reality offered by *Cardboard app*, downloaded for free at
Google store *Play*. You can, for example, visit the castle of Versailles,
in France, or make a space travel. ( Magazine Galileo, 11/2014,
p.49.).

The application demonstrates how Google approaches its user,

greater customization of access, following the premise Jenkins (2014) that

participatory practices coexist tradition, but are modes of exchange and

[82]STOCKER, Gerfried, "In addition to the files," in BEIGUELMAN, Giselle. Possible future: art, museum and digital files. São Paulo: Peirópolis, 2014, p. 61.

adaptation. According to him, this notion of spread increases diversity,

driven by curiosity, promoting all kinds of cultural exchanges. O

*Cardboard* was announced by Google during the event I / O 2014. Competing with

the *Oculus Rift,* Facebook, he explores accessibility as it is done for

*smartphone* be attached to your handmade cardboard casing, making the cell

an interactive lens with existing services Google content such as

Google Earth, YouTube and Google+.

Figure 9 - Cardboard Google Images [83]

The application allows you to select the desired type of drive, either through the streets of *Streetview* , for exhibitions, *tours* the world, among others. The visit by Versailles, for example, conditions the user visits for all their rooms and details, when you realize the confrontation with the idea of Reality Virtual. Although it seems an application of virtual reality, the visit to the Palace

[83] Available at < https://www.google.com/get/cardboard >. Accessed on January 20, 2015

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Versailles by *Cardboard* is a variable of Mixed Reality, as commands occur in real time, and linked to the user's presence. resuming the delimitations of Kirner (2006), it is an application in the virtual environment depends on objects and actions of the physical world, not an application you want to cause total immersion of the user in the virtual environment.

Based on the technical issues of this research, it is proposed to define it while Virtuality Augmented, as it represents a virtualized dynamic connected to the displacement drive and the physically present user. Each User physical movement is an action within the application.

The design of alternative and cheaper solutions makes independent researchers (linked to universities) are engaged in Application Mixed Reality in exhibition spaces. Glauco Todesco [84] (2006) in his doctoral thesis on Digital Symbiosis develops a project Remote and interactive visit through an immersive helmet which allows entering information and viewing physical environments in real time.

Digital Symbiosis concept in the context of Mixed Reality, close to relationship between humans and computer. Todesco (2006) points out that the Digital Symbiosis requirements are similar to Virtual and Mixed Reality. He points out that in the case of exhibition spaces can be generated an interactive guide that takes users remotely the exhibition experience:

> In the case of a museum, a real guide can lead to remote users know the works of art. The big difference compared to applications that provide similar experiences is that the images displayed are real and the guide can take the doubt and give each user Explanations according to the characteristics of each group. For example, a group of art students have different interests of a group of

They make the registration to participate in this remote visit. (TODESCO, 2006, p. 44).

Its practical design is at the Imperial Museum, which implements a

equipment for remote visit, which runs through a helmet with

sensors and cameras. The data is transmitted in real time to a

computer (anywhere in the world), which connected the public can see, enter

and edit information about images and works through a reading system

by codes (QR-Codes).

Marcelo de Paiva Guimaraes [85] is another example as a researcher at

field solutions in Mixed Reality. Develops partnerships in various

federal and state institutions of the country, projects in the field of Reality

Virtual and Mixed: *caves* and interactive 3D projections, translation program in Pounds,

simulators for the health field, virtual museums in 3D, interactive for

visitation. Some of his designs were made in partnership with the company

Corollarium technology.

In an interview, Bruno Barberi Gnecco explains that one Corollariumé

company that produces solutions in the IT field with an emphasis on 2D and 3D visualization

interactive. Their tools create immersive virtual environments, Virtual Reality and

Mixed. Currently developing an Administration System Project

Content for Museums (which contributed to building and launching the web). THE

proposal favors traditional institutions, collectors, art galleries, artists

and festivals, whose aim is the provision of a web platform that allows

easy administrator for the content editing, with the inclusion of collection of images,

data of artists, schedule of visits, online purchase and entries

more. The project includes a personalized support for development

specific solutions, ranging from the collection of the scanning to the development of

applications of Mixed Reality. The company works with the democratization

interactive solutions for museums.

85 He holds a post-doctorate from the Federal University of São Carlos (2011) in the Systems area Distributed and Virtual Reality, PhD in Electrical Engineering from the University of São Paulo (2004) in the field of Virtual Reality, master's degree in Computer Science from the University Federal de São Carlos (2000) in the area of Distributed Systems and Computer Networks, specialization in Information Systems by the Superior Municipal Institute of Education of Assisi (1996) and a degree in Data Processing Technology by the Municipal Institute of Education Top of Assisi (1994). He is currently a professor at the Federal University of São Paulo / Open University of Brazil. It has experience in Computer Science, with emphasis on Basic Software, acting on the following topics: Virtual Reality Augmented Reality, Distributed Systems and Distance Learning. He is a member of the Program Master in Computer Science Faculty of Campo Limpo Paulista.

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There are specific initiatives of Mixed Reality, as Manifest.AR project,

working inside and outside the institutional spaces. It is a collective of

artists from around the world, whose works are produced in Augmented Reality

and propose urban interventions as public art. The collective develops

objects, exhibitions and interventions around the world, including New York,

Venice, Istanbul, Beijing, Cairo, Tokyo, Copenhagen and Berlin. Among its actions

is illegal WeARinMoMA exposure and participation in the Conflux festival,

both in New York. Noteworthy are his actions at the Venice Biennale 2011 and

ISEA in 2011 in Istanbul.

Figure 10 - Manifet.AR 86

During the Venice Biennale, the group developed an implementation

Augmented Reality creating virtual pavilions. The public could interact with

these pavilions and works amid the traditional space of the Biennale. Some of

works were exhibited in public spaces, such as the Piazza San Marco. the *AR*

*pavilions* , as the collective calls, reflecting the rapid expansion of new

Art of possibilities in Augmented Reality.

86 Available at < www.manifestar.info >. Accessed on July 4, 2015.

The group sees this medium as a way to transform the public space and
institutional through virtual objects, which react and overlaps
Configuration physical places. The use of this technology as a work
Art is an entirely novel proposition and explores all that
and we know experienced by mixing the real and hyper-real.
Physically, nothing changes, the user does *download* and loads the application
Augmented Reality on your iPhone or Android and activates the camera
to see the world around him. The application uses geolocation,
markers and *software* for image recognition to generate three
dimensional art objects, allowing the public to see the works
integrated into locations like there are in the real world. [87]

Figure 11 - Manifest.AR [88]

During the ISEA in Istanbul, the group has developed the project *Invisible*

*Istanbul* , which uses Augmented Reality and *smartphones* to exhibit works of art

Virtual via GPS in specific physical areas of the city and the biennial. The result

It is a surreal and poetic sum between the physical world and the virtual. The action is

in two series of works of art, *Captured Images* and *Urban Dynamics* . For

interact, users use a *smartphone* or *tablet* with Internet access,

following the specific location of the work determined by GPS. The interactor interacts

with works of art around him and seizes Istanbul culture fragments.

87Available at: < http://manifestarblog.wordpress.com/about/ > . Translation our : *The group sees this medium as a way of transforming public space and Institutions by installing virtual objects, Which Respond to and overlay the configuration of physical meaning located. Utilizing this technology the artwork is an entirely new proposition and explores all that we know and experience of the mixture of the real and the hyper-real. Physically, nothing changes, the audience can simply download and launch an Augmented Reality Browser app on iPhone or Android Their aim and the devices' camera to view the world around Them. The application uses geolocation, marker tracking and image recognition software to superimpose computer generated three-dimensional art objects, enabling the the public to see the work integrated into the physical location if it existed in the real world.* Access Date: 30 August 2014.

88 Available at < www.manifestar.info >. Accessed on: November 29, 2014.

The collective Manifest.AR works with social and political issues, the environment

urban, through Augmented Reality, and exemplifies a Half Expository Mobile.

Based on projects like the Manifest.AR group in 2014 it was

developed the experimental design medium Expository Mobile with Technology

Augmented Reality art [in] Muzz. Its name plays with sounds and acronyms, as

"AR" stands for *Augmented Reality* and keeps alluding to the word "art", "[in]" means the

Connector idea, alluding to the interactivity, and "Muzz" refers to the sound of the word

"Museum", similar in most languages. The initiative allowed the creation of

exhibitions Reality Augmented photography, video, drawing, painting and

other artistic languages, leading them to any environment that possessed

a connection *wi-fi* and a mobile device with the app, Layar, installed on your

system.

exhibitions were developed the ARt [in] Muzz at the Federal University

Santa Maria (9th Symposium of Contemporary Art: Expository modes) in

Federal University of Rio de Janeiro ( *4th Computer Art Congress* ) and

Federal University of Brasilia (13th International Art and Technology Meeting).

In 2015, I was accepted to exhibit at international event ARTECH, which occurs in

Portugal. The project is the result of partnerships with photographers Carlos Alberto

Donaduzzi and Darci Raquel Fonseca, who contribute their works for

exhibitions, resulting in shows *Everyday doused by Carlos*

*Donaduzzi,* a series of underwater photos, and *Matter and objects with Raquel*

*Fonseca* , consisting of photographs taken by iPhone.

Figure 12 - ART [in] Muzz [89]

The project works by reading code figures, which generate images
virtual and display content. It is linked to this master's research
by PPGART / UFSM, as a practical extension of theoretical research. O
network character is evident because the Layar application allows sharing
works accessed on social networks, repositioning the authorship in the Middle
Exhibition, for the power of propagation is in the hands of the interactor. The project is
collective, and has the area of IT employees, design and visual arts.

The differential of a Expository Medium with Mixed Reality Mobile, as well
like Google's design and Digital Symbiosis, Glauco Todesco is the inclusion.
ARt [in] allows Muzz think of as museums, art centers and galleries can
take their exhibits to any location. Especially cultural institutions,
whose purpose is education, they are able to make use of this system to
move the art for the various states of Brazil and around the world.

Actions such as the collective Manifest.AR exemplify that category. If
used in cultural, visitation in system and exhibition dynamics,
Mixed Reality is regarded as dynamic museum / collection in a structure

Interactive institutional. Noteworthy is the project of the Krakow National Museum, *Secrets Behind Paintings* , which creates an interactive audio guide for codes Augmented Reality. In cases of application of Mixed Reality to space Urban, using geolocalizadores and expand institutional action, the category delimited is the institutional extension. The Museum of London is this

[89] Available at: < www.artinmuzz.wordpress.com >. Accessed on January 5, 2015.

category through your application, *Streetmuseum* , which allows access to the collection photographic history through urban space.

## 4 MIXED REALITY AND THE EXHIBITION

The research outlined in the preceding chapter support the use of Reality Mixed for artistic and cultural purposes and strengthen the key concept of research, insitu <> Influxu. This chapter discusses six examples of application of Reality Joint exhibition spaces in assessing the establishment of the Environment, the dynamics insitu <> Influxu and public cycle <> work <> means.

The Middle Expository expands the use of technology increasing its condition materic across networks, for the many planes of reality, time and space possible. Jenkins (2014) points out how the makers at various levels, direct communication to the public through interactive applications.

> Participatory culture is not new. In fact, she has multiple stories dating back at least to the 19th century What we call culture Participatory has much in common with these and other more old popular cultural production and exchange. When thinking about these several stories, it is essential to note that the activities participatory differ substantially, depending on the community and media mode in question. (Jenkins, 2014, p. 358).

The network behavior capilariza actions, making the virtual ambivalent to the physical, to the extent that they mixam in a version of completely inseparable reality.

Analyzes examples of Mixed Reality in Expository Half considering three ways: as a work of art, dynamic museum / collection and extension institutional (application). In all cases, it uses the computer interface mobile interactivity to realize the presence of the public cycle <> work <> means by the dynamic insitu <> Influxu. As a result, there are new moves information and affection.

On cases that will be discussed in this chapter - ARART works and Extinction, WeARinMoMA and actions *Secrets Behind Paintings* and applications *Streetmuseum and Talking Statues* - it takes criticism of the application modes of Mixed reality in institutional / urban space, because according to Agamben (2006), process of forming an interactive device has thereon a conviction powers and ideologies, which characterizes the non - neutrality of this *gadget* . O

device is controlled by a series of commands and codes, which lead and limit actions. The computer interface acts on the user, it directs and maps the interactor's decisions, this limited the device guidelines. Soon, it is noted that the exhibition medium is also non-neutral, for which reason its instrumentation for control is so suggestive.

Thus, Jenkins (2014) defends the care of creation means Interactive circulation, so that they are not justified solely by technology infrastructure (binary). Although the computer interface is neutral, its application is subjective and intentional. The following cases examined discuss the institutional power and its displacement. The power transition is perceived, especially through information sharing and the institutional dynamics, however, questioned the real reasons are the implementation of network technologies in exhibitions.

Realizes that the introduction of haptic interfaces and the use of Reality Increased in institutional settings, makes interactivity to overflow urban and user everyday environment, raising the debate on capillarity of powers by the network in the city's connection process. What transpires is the powers and breakage map (partial), as the interactive processes measure the visitor's actions on the acquis and institution. THE supremacy of the great art spaces gives rise to the question of power Absolute before a new logic of visitation and strengthening of counterpoint these institutions as they join the computer industry.

It reinforces the need for critical insight into the understanding of the functions museum, understood, of course, as a cultural tool. However, very little associated with potential weapon condition for control of the company. However, the presence of interactive interfaces contributes to a dense discussion

on shifts and technological insertions in the institutional space. treated
is a debate about the pros and cons of interactivity
museum space, and the threshold between interactive display and control.

Interactive projects presented here allow discuss how much a
application is accepted by the assimilation of its technology, a fact increasingly common

as applications are intuitive and use haptic interfaces. However, the
price to be paid is transparency (lack) of data and actions of each
individual. The issue of power and control is relevant to the discussion of
Half of the relationships and dynamics insitu <> Influxu in this chapter.

Paul Virilio (2012) brings to mind the acceleration of reality and time due
a society that is strengthened by connections, and highlights the strengthening
institutions for the establishment of fear. He states that the acceleration of time
destroys gradually the condition of the traditional space, perspective from which one
claim control of issues starting from a veiled imposition of fear, and
They will strengthen the cultural field as they arise interests
corporative and economic.

Somehow it can not be denied that the structure contributes museum
a number of ways to control and domestication of social behavior from
your origin. Moving the museum (if *Talking Statues* ), out of
physical institutional structure, makes this discussion even more tenuous because
influence of culture in the pacification of society is evident. Virilio confirms the
somehow suspected that the culture machines may be machine
control, and even if this research does not focus on this level, it is
fundamental importance for a moment of reflection on the wonder
technological, critical interface.

The critical view transpires partial control of the museum, who still dominates
a series of events, institutional and curatorial decisions, however, is
controlled by the cloud of information managed by the large coorporações
computer discreetly allocated in daily life.

The presence of a veiled control questions the values in the field of art,
whether related to work, interactivity or space. Raymond Moulin

(2007) states that the assessment of the value of a work of art is subject to a dual uncertainty related to the characteristics of each work, its authenticity, and above all, the hierarchy of aesthetic values. According Moulin, the art research modern and contemporary contributes to space, enabling the renewal

artistic and marketing interests. Thus, the discussion of the value and power continuously transformed over the decades.

> The bet on a cybrid culture (marked by the interconnection of networks *on* and *off-line* ) is not a new industry capable of replacing merely old other technologies. The development of this new horizon Reading that the cyber world and the proliferation promises that Mobile supports, makes it necessary to think what we want from texts, memory and own knowledge technologies. (BEIGUELMAN, 2002, p. 17).

Undoubtedly, the context of Expository medium is immersed both in the sense of value indicated by Moulin, as modeled on the importance of technologies knowledge, by Beiguelman.

Agamben and Moulin deal with the non-neutrality (whether of space, or device), which shows the powers and makes you think the instabilities in the use of binary technology. However, the computational solutions may work way complementary institutions, says Patrícia Canetti [90] . She points out that use applications and network views raise important issues in the field art, transforming the way files and access are viewed / exposed. Malkin (2011) believes that the network view will change to the history of art and museology, as well as transformed the history and archeology.

Therefore, the dissemination of information, reported by Jenkins (2014) shows network crop characteristics in which participants are induced to spread knowledge and opinion (informational capillarity). The middle Exhibition therefore is connected (through the realities that takes, or his public) and establishes a series of information, absorbed and disseminated by its users: "When a person hears, reads or sees content shared, she thinks not only as producers may have wished say that stuff, but what I was trying to tell him who

He shared with her. " [91] The power of dissemination and credibility are not absolute institution, for who propagates power is the user himself.

[90] Canetti, Patrícia Kunst, "Analysis and art events display as a social network", in BEIGUELMAN, G. Possible future: art, museum and digital files. São Paulo: Peirópolis, 2014, p 202.
[91] JENKINS, 2014, p.37.

> This conflict between a view that displays the network communication
> as agent fundamentally modifying the nature of the audience,
> and another in which it does not change anything significant in relation to
> existing structures is one of a series of competitive aspects,
> that are shaping our understanding of participation *online*
> during this moment of transition. (Jenkins, 2014, p.198).

Networking, exposure interator pierces several steps in its path

Expository in half. The first is the establishment of the subject and its circuit

visitation because the interactor moves as it suits him. The second is the act of "power

do ", which refers to the action of interactor on Environment, making it, in fact, interactor.

The third is the action potential that is latent in the visitor and the interface, and the fourth

It is aware of his action process in the Middle. This is the fourth stage

instant mixed-awareness, which makes apparent the layers of reality and

many times.

Therefore, the Mixed Reality supports interactive dynamics while

(A) work of art, (b) and dynamic museum collection (institutional dynamics can

be reviewed by approximation with binary language) and (c) Extension

institutional.

## 4.1 RM WHILE WORK: ARART AND TERMINATION

> From the 50s, we witnessed to build, in the art world, two
> major trends (...) on the one hand, taking an interest in a new
> break in communication with the media model, a trend that
> They seek to involve the viewer's own elaboration of the works under
> the mode *feedback* cyber thereby changing the status of both
> work as that of the author. ( COUCHOT, 2003: 103)

The artwork inside the computer poetic presents changes in a

particular level by data flows and conducting experiments. As

points Gilberto Prado (2014), the artist develops his work as an experience

poetic nature, taking into consideration a number of elements composition.

According Couchot (2003), from 1950 comes a break model traditional media, whose new communication makes the viewer participate in the

preparation of works by changing the notion of authorship. Mixed Reality Works add and distort realities authorship, institutional power and the very existence the work. Ned Rossiter (2006) defends the manifestations in art and technology as subversive of machinic function because reprogram the codes by creating a "Procedural aesthetics of new media", that goes beyond the visible, it is developed through the analysis and networking practices, extrapolating predetermined functionality in the equipment.

Figure 13 - ARART [92]

The Mixed Reality can be a development mode for the poetic interactive computing because it allows the visitor to recreate the space through insertion of virtual objects on the physical plane. The work with Mixed Reality is becomes complex due to its interactive existence. Therefore, the more technology (especially *mobile)* advances and interfaces are internalized the body more artistic action options in Mixed Reality arise.

ARART is a work developed by the Japanese group, Takeshi Mukai, Kei Shiratori, Younghyo Bak. Functions as an application that gives life to objects via the Augmented Reality. The work distorts the physical world with devices

furniture, adding new stories to images (replicas of famous works,

paintings and analog images), which are unexpectedly lively in action

ARART the application. Exposed at the 2013 edition of the International Festival

[92] Available at < www.arart.info >. Accessed on 4 January 2015.

Electronic Language, returned in 2014 edition, enlarged and distributed scale

in large panels, the show space.

The predominant technology is the Augmented Reality. The interface

summarizes the computational used if mobile devices ( *phones* and *tablets* )

with installation ARART application developed specifically for iOS. THE

interactivity occurs when the user activates the application on your *mobile* and

points to the pictures of the facility. Each image works as a code

Reality Increases for animation itself, which have good

humor, joking with the history of famous works and contemporary culture.

It is perceived interactivity via work in which the exhibition medium is modified by

work and establishes the institutional environment because the space used was the Gallery

FIESP.

The relationship between public <> work <> half puts the interactor in

condition subversive agent, as most exposed images are works of

art consecrated, animated by interactivity. The work does not work while

educational tool, but you are questioning the system and free as language

artistic. The sacralized work becomes an entertainment object, in a

revisiting filled with profanity, among which are *the girl earring*

*Pearl* and *Twelve Sunflowers in a jar* . ARART exemplifies how Reality

Joint can be applied as a work of art, modifying the space that houses.

Jean Marc Poinsot (1996) highlights the morphological relationship between the profile of the

contemporary artwork and exposure, resulting in several refurbishments

the exhibition space and the work. Gonçalves (2004) states that the exhibit is part

the shape of artistic design and is the structural essence of the work created by the

artist.

A second work of art, extinction, reinforces these claims. The work

interactive, developed by Suzete Venturelli and the MídiaLab team (UNB) is a

Augmented Reality installation that invites the public to play on a
machine to catch bugs, in which there are balls with markers that trigger an

Virtual lion tamarin, modeled by *software* . It works with Junaio application through
capture icons via camera. Around the facility, are

information about the population of golden lion tamarins in Brazil, as well as a panel
information linked to the designs *Greenpeace* .

Figure 14 - Termination [93]

The predominant technology is the Augmented Reality. The interface
used has a mechanical part (crane with plastic pellets) and part of
computer ( *webcam* , *notebook* and projector). The *webcam* is
connected to a code reading program, responsible for generating the animation
Golden lion tamarin. After the label is read by the camera, the virtual object is
projected onto a wall, which allows the interactor to see its image with the
small virtual monkey. That is, the interactor's relationship with the device occurs
by reading the code: the user enters the installation, trying to catch a ball
the crane, if you can, you can trigger the code contained in it through the *webcam* ,
that will read through Junaio program and then project the animation
virtual monkey on the wall.

The interactor and work related stay indefinitely,
Virtual because the monkey can be seen anywhere (using the catalog
exposure, with the activation code and the application installed). This weather
extended it is of great importance, because the application is not restricted to the present time

or conscious / present reality. There is also an analogy to the end of extinction Golden lion tamarin, for each visitor carries a "virtual" version of

93 Available at: < www.midialab.unb.br > . Accessed on January 6, 2015.

animal, contributing to the increase of the species in the country, although so figurative in a virtualized plan.

The Expository Half establishes the institutional environment and character mobile because it is located in physical space of the Palace of Arts at the University of São Paulo, and still travels with the interactor. It interactivity via work and the relationship between age <> work <> means determines as the interactor agent for the purpose of extinction. The work permeates the issues of ecology and sustainability, highlighting the educational nature.

Both works have aspects in common, as sensitize the public in their cause. The public cycle <> work <> means checks the interactive dynamics in ARART which is characterized by playful and subvert the work of sacralized art, in an entertainment object, and extinction is characterized by social and ecological, in an awareness game. The works reconstruct contexts through computer technology, the Mixed Reality and interactor action. THE interactivity allows the real be distorted by the individual, which activates existing realities. Its pillar is the presence of computer interface and interactivity, which enable the sum of realities into a single, Mixed, in Half Exhibition.

However, there is a point that distinguishes the dynamics and ARART Extinction: the nature of its content. While ARART works on the sign of famous works, Extinction part of an absolutely own content, generating another discussion on the effectiveness of each proposal. ARART should perhaps be questioned when using works of analog-historical nature in its dynamics, after all she repositions the experience so that the experience can Monalisa become commonplace, built superficially. Possibly worth think magnificent works of Van Gogh are best experienced when in nature analog, and the other way - trying to scan its purity - negatively deconstruct the feel, the look, the dip. Extinction, in turn, part

of course digital objects, further virtualized by the experience between physical and virtual world.

In addition to the technological issues that enrich the interactor experience, there is the surveillance context of each of the works. Addressing the issue of control, it is clear that both ARART extinction as are system hostages computational, and this aspect is nothing new to evaluate it all works Interactive are. But the concept of the work makes it interesting to evaluate the control because ARART is exactly a work that deconstructs the supposed domain (Divine) of the artwork. Its dynamic provides a subversion of power completely illusory, that contrary to perceived directs the decisions of user.

At the same time, it also undermines the educational character linked to many art exhibitions, and in this respect is valid understand that art does not is necessarily linked to education. The control is established through Computer interface that resizes the perception of interactor therefore still that artists seek to subvert the art system as a starting point project, they are faced with a system of dependencies maze governing machine and interactivity.

However, this type of antagonism is what enriches the discussion about of the work, and enables to understand that the microcosm of an interactive installation, as ARART reflects an absolute and greater truth: the existence of a system invisible controller, distributed through the power of access networks shared.

Extinction is resigned to their educational and sustainable paper, not opposes the existence of a vigilant control of the machine. However, intensifies the understanding of art as neutral and free cultural way of perversity, whose power comes down on the spread of knowledge. It is a false neutrality, able to provide gaps in the handling of the cultural sector by large companies, through artistic initiatives, whose aesthetic does not seem threatening (on the contrary, it is believed that the artistic action is a breach of Invisibility regime corporative-control technology, as artists are

endowed with a creative freedom that allows the questioning / subvert technical characteristics of the network).

Currently, this interest shifts to large companies computer, such as Google and Facebook, building devices and programs to the artistic field, and reframe the current system of contemporary art immersed in cyberculture.

So ARART and extinction are counterpoints on the concept of term, technology and above all, as the perception of control that governs the stresses of a Expository means. However, both are hostages of this greater power, managed by computers and businesses. Perhaps at this point lies the real reason for resistance (some companies) to *open source* : the dilution from power. In Anyway, these works help in understanding the Mixed Reality, the conscious and unconscious reality of access, their control methods and power layers that exist between artistic intention and the interactive result. AND however the artist seeks out the system, the programming code is result of the sum of old codes and methods in information layers linked to the powers of the computer system.

One can trace thus parallel with the perspective avant throughout history in art: there is the wing of artists who break the existing system (Forefront), which at a given moment is absorbed by the system starting a new cycle. However, the system of global information networks is a regime intelligent and programmed with fast functions, imposing the cultural sector a cycle endless reinvention, after increasingly, it is difficult to overcome the surveillance machine or subvert the data system. The gradual integration of the Internet Things, the generative computing, artificial intelligence, enhances control of Binary data on the common context.

This subchapter therefore enriches the relationship between interface, construction the reality and the exhibition space, in the medium condition. Such applications, built by artists, go to control the reflection of the meeting and the layers power, through invisible modes of action. However, it is not a exclusive condition of artworks, but groups that challenge the

articulation of computer technology and its unifying system if spaces
alternative to *hacker clubs,* garage laboratories and FabLabs. Manovich
(2002) points out that the new modes of access, distribution and manipulation come

software and, therefore, they are the result of individual initiatives, corporative
or entrepreneurial creation. According to him, all these mutations and new species
current software are highly social, they are developed by groups of
people, and tested by an even greater number of users. are systems
constantly updated to combat competitors, reaching the emotion
and sociability. Thus, it appears that there is a domain from the levy, and
yes, the subliminariedade through emotion, networking.

4.2 RM AS DYNAMICS AND COLLECTION museum: *WEARINMOMA* E
*SECRETS BEHIND Paitings*

It presents two examples of mixed reality application spaces
institutional, discussing the issues of museum power and control
by technology.

Frieling (2014) supports the action of artists questioning in relation to
institutions. According to him, there is a request for collaboration to museums so that
participate formally as co-producers of contemporary artwork.
Traditionally, museums take a "neutral" structure in the organization
exhibitions and collections. Gonçalves (2004) defines standard appropriate space for the
modern art as one that erases its social function, however, at present,
this neutrality is a misnomer as museums and cultural institutions are
asked about their relationship with the artists and the public. While the museum
try to keep your exhibition space as a place "neutral" in the twenty-first century, the idea of
place for contemporary artists takes on importance as a language. in this
aspect, the art assumed the call to explore the space and construction, as
basic syntax of artistic creation, it uses the spatial dimension. 94

According to Gonçalves (2014), MoMA exemplifies this attempt
neutralization, in the art, because its rooms are painted white, with minimal

interference in the works, and the distribution of parts is made with certain

GONÇALVES, 2004, p. 54.

alignment to match the look of the visitor and symmetry. With the insertion of mobile digital technologies, haptic and intuitive, the society in which the museum inserts, is another. This entails a vulnerability of the institutions, and opens possibility of intervention and questioning.

Even the Museum of Modern Art of New York is questioned by a group of artists in 2010. WeARinMoMA (October 2010) is an exhibition clandestine held at MoMA by two artists, Sander Veenhof - Holland and Mark Skwarek - US (participants Manifest.AR), challenging the museum's action before the advance of digital technology:

> In the distance, via GPS, the two artists powered computer commands and made dozens of three-dimensional parts produced by them and 30 other artists arose guests at the mobile screen and *tablets* of who circulated by MoMA that day. [...] Instead of being angry with the artists, the museum board applauded the boldness and incorporated the virtual parts to your collection. And because of that, many of the museums United States and Europe stopped to rethink its relationship with technology. Since then, many have looked into reality increased and launched avant-garde projects. [95]

Since then, a number of institutions such as Natural History Museum Washington, the *Brooklyn Museum* in New York, the *Sukiennice Museum* of Krakow, the Louvre in Paris, began to incorporate in their spatial dynamics and institutional such technological possibilities. The *Museum of London* has developed an application called *Streetmuseum* , allowing access, in urban areas, more than 200 images of its collection through augmented reality.

Figure 15 - *WeARinMoMA* [96]

For operating WeARinMoMA, we use the Augmented Reality,
mobile devices and the application developed by the group. Through the structure
physical and permanent works from MoMA's collection, is displayed the virtual exhibition
simultaneously consecrated works of modernism. This is a proposal
dissolution of the exhibition space and call for institutional review. THE
interaction occurs via work and expository medium is established in the environment
institutional Specifically, it depends on the physical structure and MOMA
triggering the interactive dynamics of Augmented Reality.

96 Available at: < www.sndrv.nl/moma > Access on January 6, 2015.

The public cycle <> work <> means it makes the work visible by Reality

Increased not in the permanent space. Means that there

the work is directly proportional to the public, a fact confirmed by Gonçalves (2004)

when evaluating that exposure by itself, it is an open field for the visitor build

your story. According to her, the space and time are supporting the act of visitation, which

at every moment of displacement generates an experience and his forgetfulness. At

are constructed realities result of interactivity that includes the methods of

visitation, exposure, types of interfaces and the sensitivity level of the applications.

Immersion and inclusion strengthens the relationship between public, work and Half. The character

inclusive is present in WeARinMoMA whose exposed assets did not exist without a

active audience.

It is perceived as the traditional power relationship is shattered. according to Jenkins

(2014) employees are accomplices of the dominant regimes of power, yet

who often use their incorporation to redirect energies and resources. At the

WeARinMoMA context, employees are artists, who use the

questioning interactive dynamic at the same time strengthen identity

the institution. The show becomes an affirmation of the experimental nature of the museum,

and the dominant system of power is reviewed by sharing functions

with the public. The result is the inclusion of a clandestine-virtual collection at MoMA

reviewing the possibility of obsolescence.

This set of questions highlights the need to review

museological models, the desire for inclusion of artists in large collections and

importance of public institutional action. It is "the assumption that

circulation is constituted as one of the key forces shaping " 97 to the environment

media and contemporary culture. The underground exhibition was a success due

the strength of social media, the power of propagation and sharing

information, based on "a belief that if we are able to understand

better institutional and social factors that formed the nature of the movement,

We can become more effective by placing alternative messages

in circulation". 98 Again , the idea arises capillarity.

97

As to social networks, other institutional remodeling project with Mixed reality stands out. Equivalent to a gallery of nineteenth century art Polish, the National Museum of Krakow developed the campaign *Secrets Behind Paintings*, designed to expand the audience reach after a period of institutional renewal. This is an Augmented Reality application - *New Sukiennice* - the use of which brings "life" to the paintings to present their stories short film.

Figure 16 - *Secrets Behind Paitings* [99]

It uses the Augmented Reality and the prevailing interface is the *mobile* , through *smartphones* offered as audio guides to the museum visitation. For its operation, there is the Augmented Reality application, *New Sukiennice* , the use of which animates the paintings. The interaction occurs via half as the collection is made partially interactive and the audience, albeit in an exhibition Conventional analog, becomes interactor. The medium is established in an environment institutional.

One perceives the public cycle <> work <> means by the visitor's condition as interactor. Each user carries a unique experience and information

Additional experienced along the way, focusing all profiles visitors. The museum implements a promotional action and changes its structure standard for Expository Half, reinforced by actions on the network by the media social. The space and time writhe at varying levels of awareness and perception: each interactor builds its relations and levels. The work of art retains its nature as painting, sculpture, but its informative role / education is enhanced in such a way that history, the symbolism, the meaning and contextualization become highly affordable.

The concentration of power and knowledge becomes shared with the user, and it, share it on the network. The two actions reinforce that to "that reach people now, it is necessary to find a way to cross with them on their own terms [...]. These places are defined by the passions of people. People's lives do not revolve around your brand, revolves around the life". [100] In this sense, it is understood why collective and collaborative dynamics (Google, Wikipedia, Wikileaks, etc.) spread rapidly through the network, as they are close to the user's interests. If a particular technology is inserted in daily life, it must understand the human relationship modes with other humans, with their own lives, with the knowledge and communication.

Within the powers, the discussion is established from the Middle Exhibition (as a space renovated), indeed, and institutional review. Speak about cultural institution is to talk about the power hierarchy and sharing sensitive, proposed by Jacques Ranciére (2005). The prospect of sharing allows understand the dissolution of institutional power from the intervention of the anonymous, of the voiceless.

In the case of WeARinMoMA, it really happens, because the group of artists is heard by social networks and inserts its dynamics by Reality Mixed, whose main course is to share an aesthetic experience out of power museum management. "This model shuffles the matching rules to

[100] FISKE in JENKINS, Henry. Culture Connection. São Paulo: Aleph, 2014, p. 250.

distance between the speakable and the invisible, the representative own logic. " [101] The

invisible become visible on the MOMA exposure and standard hierarchy is

corrupt, but as the museum acquires the digital collection, cycle

reframing ends and returns to the starting point. The artists share a

critical perception of the artistic field contours and provide a union

voices and knowledge that integrate both the Internet and the physical space of the museum.

But it is worth reflecting that, from the beginning, the innovative proposal

WeARinMoMA is hostage to the internet and the spread of information over the network,

after all, social networks are key point of the proposal. However, there is the burden of

dissemination of ideas that, until recently, was suppressed in the field

cultural. The web 3.0 and 4.0 interfere positively about actions that go against

prevailing system, and propose a redefinition of powers. But it takes

aware that power is always subjected to another, and that an action

questioner is also sublocada a control system (visible or not).

In this case, the technological control overrides the control of the institution, which is

delivery to the control of the computer system through the acquisition of assets

digital Augmented Reality. This movement occurs beyond the central power

MoMA.

The project *Secrets Behind Paintings* may seem less bold because it

is an institutional innovation, however, is even more innovative by this

condition, it is expected that the artist questions the default behavior, after all

"Artistic practices are" ways of doing "that interveem in general distribution

the ways to do in its relations with ways of being and ways of

visibility " [102] , while the museum is the historical foundation, whose

conventions are necessary to maintain the cultural character and their respective

functions.

There seems to be, above all, an accommodation of managers to implement

interactive technologies to access artistic collections. If WeARinMoMA voices

the invisible *Sukiennice Museum* gives voice to the highly visible, but not

always well understood: the works. The work of art requires a level of education,

[101] Rancière, 2005, p. 20.
[102] Rancière, 2005, p.17.

erudition, knowledge of history, iconography, contextualization capacity.

Soon, the application gives voice to fun way to work, resulting in listening

the deaf, approaching the entire population (children, adults, youth, elderly) of

its collection.

The good thing is the informational accessibility, on the initiative of

institution. But there are always hierarchies and powers, and analysis allows to evaluate the

overwhelming power that an exhibition space, especially a museum, has on the

consumer culture and dissemination of ideas. According to the museum's data, 20% [103]

the population of Krakow visited the museum in the first month of implementation of the new

dynamic as it proves that new methods of communication power the

reach of the public. It is observed that the project *Secrets Behind Paintings* acts as

Accessibility tool and at the same time as tool

manipulation been thought from the interactive system / museum vigilant. To

same time, the initiative takes up the discussion of ARART proposal on

adapting the works of nature analogue to the digital language and what are the

true sensitive relationships resulting from a historical work scanned

its dynamics.

On the one hand, it can mean a genuine intention, and secondly, a method

control. And yet, above the institution is the company that manages this content,

server on which the application database is allocated, and many others

specificities techniques that place the computer system as the largest manager

the whole dynamic.

> I call distribution of the sensible system of sensitive evidence
> reveals at the same time, the existence of a *common* and clippings
> Define places and parts. A share of the fixed-sensitive,
> therefore, at the same time a *common* shared and exclusive parties.
> This distribution of parts and places is based on a sharing
> spaces, times and types of activity that determines the proper
> how the *common* lends itself to participation and to one another
> They take part in this sharing . ( Rancière, 2005, p. 15)

It is agreed on the issue of control in the discussion sharing

sensitive, because from the weaknesses arise solutions mediated surveillance,

case of obsolescence of museums that allows corporations instrumentalize

[103]Available at: < https://www.youtube.com/watch?v=JNY-ogBkt4Q> . Accessed on May 14, 2014.

cultural institutions. This idea of a power management on the limitations

the other is very close to the reflections already mentioned, Virilio.

The two cases analyzed in this subchapter does not explain, in fact, one

system meaning fear, but point out that there is a control regime

information. Even when knowledge reaches a high level of

share, it can be controlled by a higher agent (a business,

software, etc.). In WeARinMoMA control acts of software for the artist / public,

and artist institution. In the case of *Secrets Behind Paintings* , hierarchy

part of computing for the institution, and the institution for the final public.

RM 4.3 EXTENSION AS INSTITUTIONAL: Streetmuseum E

TALKING STATUES

Jenkins (2014) provides the creative efforts corporate containment,

strengthening closed projects with reduced circulation, whose results are

artists and more critical public, able to find angles in producentes

control cycle to break. The examples discussed below demonstrate

Mixed Reality dynamics in urban areas, such as expansion mode

institutional.

The *Streetmuseum* is an application developed by the Museum of London which

allows access by the urban environment, the photographs from different periods of

history of the UK capital (more than 200 images of its collection). At

images are added simultaneously to the street view, buildings and

sights, through a GPS system that identifies the location of

user, maps the space image and applies the picture on it.

> *Streetmuseum* gives the unique opportunity to an old London as
> you discover the capital for the first time or revisiting their seats
> favorites. Thousands of images of the extension collection the Museum of London,

with daily and historical facts [...]. Select a location on your
map of London or use GPS to locate a next image.
Point your camera at a street / urban scene, and see the same scene
old London, offering two simultaneous windows. want more
information? Just click on the Access icon for facts
historical.   104

Figure 17 - *Streetmuseum* 105

Augmented Reality is the technology used, the operation of which gives

through devices *Mobile* with wireless internet access and system

geolocation. The application allows the user to define its location and enable

virtual images. Interactivity is established between public and institution,

build a common dynamic in the urban environment.

Therefore, the interaction occurs via medium and has features as

as the medium is set in the urban environment, it acts on the image collection

analog cameras and the city. This action, unlike the cases

earlier, does not occur in the internal environment of the museum, but out of it, a fact that

proves that the Expository medium does not depend on the specific environment

physical, but the interface and interactivity. Applying Mixed Reality

104Instructions for use of Streetmuseum. Our translation: *Streetmuseum Gives a unique perspective of old London wheter you're discovering the capital for the first team or revisiting favorite haunts. Hundreds of images from the Museum of London's extensive collections showcase BOTH everyday and momentous occasions in London's history (...) Select the destinationfrom you London map or use GPS to locate an image near you. Hold your camera up to the present day street scene and see the same London location Appear in your screen, offering you a window through team. Want to know more? Simply tap the information button for historical facts.* Available in: http://www.museumoflondon.org.uk/Resources/app/you-are-here-app/home.html . Access July 2. 2014.
105Available at: < http://www.museumoflondon.org.uk >. Accessed on May 8, 2014.

(Augmented Reality) did not depend on the physical structure, in this case,
it is constructed in the urban space in real time due to the use of GPS.

The public cycle <> work <> means is reinforced by the interdependence between
user, application and institution around the city. The London museum creates
free device that acessibiliza its collection, which works only by the action of
interactor. The *Streetmuseum* approaches structures such as Google, using
the user as product through mapping (literally) preferences
user and its changes in the urban environment.

This dynamic visitation approaches propagabilidade indicated by
Jenkins (2014), whose notion of informational propagation and brings changes
significant in the sociocultural field. According to him, the media help in exchange
establishing exchanges, reciprocity, transdisciplinary, where the public
acts as a multiplier and generator of new meanings in similar roles to
the curators. *Streetmuseum* approaches the educational environment especially
the propagation function as the information moves and becomes
accessible via the mobile device. By using the application, the interactor can spread
your opinion and direct the behavior of other users in the urban space

This project highlights the Mixed Reality aware that goes beyond the use
instrumental. However, consider an application in the current urban space, it is to
into account an invisible landscape of hits. Devices with geolocation
delivers mobile interactivity, but reinforce the existence of a control
most of the user travel, and in the case of *Streetmuseum,* the proposal
It contributes to the understanding of the history, literature, making it difficult to view
perversity.

One should not, however, assign it only to the application in question, for if
It is something much bigger. According to Fernanda Bruno (2013), we live in a network
surveillance that is above the daily perception, where "at this point, it is already clear
[...] the mode of operation of the networks that make up the surveillance as
device in contemporary societies. " [106]

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[106]BRUNO, 2013, p.28.

It is essential to understand the related surveillance networks proposals Mixed reality in urban areas because they overflow control, after all, use the Mixed Reality is aware of the interactor, which at the moment of use is free to follow or not the application of the standards. In any case, whether in the urban space or exhibition, the control of the more superficial levels of access to the most data storage complex, which makes aspect *Streetmuseum,* apparently more threatening because snared all passers-by and visitors potential.

Figure 18 - *Streetmuseum* [107]

Also in London, the project appears *Talking Statues* [108] that extends the

design Mixed Reality as an institutional extension and strengthens the role

User multiplier. The charge of the project, producer and artist, Colette

Hiller [109] , put life in 29 historical monuments of London. spread

across the capital, each monument conversation with the interactor in an unprecedented dynamic,

called *Talking Statue* s (in Portuguese, "talking statues" or "statues

speakers "), in which the monuments have QR codes that drive monologues about

the city's history. The user points the phone's camera to the monument and,

then receives a call figure or character represented by that

statue, whose tough talk about 2 minutes and 30 seconds, divided between an

average of 400 words.

The *Sing London* confirms that the first two weeks of view,
so in August / 2014 still, about 6,500 people had interacted
at least with one of the monuments. As Hiller, the intention is
extend the project to other places in Europe, and perhaps US
Also, starting in cities such as Washington, Chicago and New
York. [110]

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[107] Available at: < http://www.museumoflondon.org.uk > . Accessed on February 5, 2015.
[108] Available at: < http://www.talkingstatues.co.uk/ >. Accessed on: 10 Feb. 2015.
[109] Hiller founded the organization *Sing London* , responsible for projects and events in order
to diversify and spread the culture in the capital.
[110] Available in: http://www.geekfail.net/2014/12/projeto-estatuas-falantes-revive-monumentos-de-londres.html. Accessed: 02/10/2015.

Figure 19 - Design *Talking Statues* [III]

Hiller had the support of various actors to incorporate the voice of each personality involved. The Queen Victoria ( *Queen Victoria* ), for example, is Prunella Scales performed by the soldier unknown ( *Unknow Soldier* ) by Patrick Stewart and the monument of the famous investigator Sherlock Holmes is played by writer Anthony Horowitz. The technology used in the project was developed by *Antenna International* .

*Talking Statues* is not only an urban exposure, but also a museum repositioning. The proposal builds an outdoor museum, from of a collection belonging to the city, after all, every exposed piece is part of everyday life common ways that revive and stories through the application.

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[111] Available at: < www.talkingstatues.co.uk > . Accessed on February 10, 2015.

Figure 20 - *Talking Statues* [112]

The project contributes to the construction of a new perception of printers Urban, which are ignored. This is public property, which happens to have a voice and, again refers to the sharing of sensitive. *Talking Statues* can bring life to each project monument beyond application features, and perhaps contribute to the recognition of the monuments by the population. In fact, project unites silenced the anonymous (monuments population) and brings new breath to the rhythm of the city.

This strategy of building an open collection institutionalizes the city as a major Middle Expository. However, on projects such as *Talking Statues* , should think the lines of tension that arise because there is no just revitalization of urban understanding, but an interactive system that entertains population condition that can be beneficial or alienating.

The QRCode system allows the application access, in urban areas, but is a monitoring device because it is connected to a network continuous data that is constantly changing new information. When someone accesses an application, leaves a trace in the global system, which allows its detection. At the same time *Talking Statues* has noble intentions to give voice to the forgotten monuments, establishes a crazy race between

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[112] Available at: < www.talkingstatues.co.uk > . Accessed on February 10, 2015.

user and the geolocation system (imperceptible), because each new access the system may have control interactor displacement.

Thus, the contemporary museum as Half Expository can be hostage corporations, in conjunction trends and ideas. Art seems soften the imposing character, which facilitates system management powers, whose contours become invisible. It is noticed that society rule out the existence of the impending monitoring through devices computer (especially when there is the cultural focus). But this project ( *Talking Statues* ) can be a source of motion information, stay access and frequency of a particular citizen. It appears that, unconsciously, the user is placed in the frenzied beat of connectivity, in a constant state of bliss, in which the human being indissocia functionality perversity, virtual physical.

About the museum as Half Expository as they review their role in contemporary, it seems closer to the concept of culture of gun mass, under the control of companies and corporations that introject ideas through large interactive actions. This type of project acessibiliza technology, makes the connected urban environment, but exposes each user's data and marks the rhythm accesses. Comes an invisible landscape of data that determines new urban conditions.

The project is an excellent example of Mixed Reality not visual, for his operation occurs by sound stimuli, providing another experience of interactivity through the common act of answering the phone. Perhaps this is the mood contained in the work: that in the midst of a world of messages and hypertext, proposes a telephone call between the virtual world and the physical, in which the awareness of the Mixed Reality is awakened.

However, it follows from this comparison is that *Streetmuseum* is no doubt highly institutional and exploits the technology *mobile* to the museum, in turn, *Talking Statues* institutionalizes the city in a dynamic collections public, outdoor. The contrast is interesting because it provides a dynamic expansion and contraction of the contemporary museum (as Expository Half). O

aspect of the complete surveillance picture *Talking Statues* , because society

contemporary is constantly monitored, and this expansion effect <> contraction

Space / collection, makes rethink computer control awareness about

ordinary life.

> We are often challenged by the emergence of technologies,
> practices, appropriations, whether individual, collective, corporate,
> requiring different shifts: conceptual, methodological,
> aesthetic, cognitive, political subjective. On the one hand, we must give up,
> at least in part, large and finished models of understanding
> surveillance, lest we lose sight of the singularities of
> processes, devices and practices that are ongoing. On the other hand, describe
> these singularities is as necessary as risky, since
> It will always be somehow overcome by the flow
> events and dynamics that we wish to grasp. ( Bruno, 2013, p.
> 17).

In both cases the control is imminent, especially the extent to which

users assimilate the access points, the input and output of data in a web

informational. If you added the access map by GPS + of QRCodes *Talking*

*Statues* , there is a gigantic mesh citizens and their likely paths

daily. This exemplifies how context control voltages are likely will

discussion. The proposed *Talking Statues* transpires the musealization urban,

in a game between "stop being museum" and "appropriate urban whole as

museum ", discussing the realities in the exhibition space .

*Streetmuseum* deals with the expansion of the museum's collection. If there is a collection

isolated, it is externalized through the application proposes to use the urban space

as the background. *Talking Statues* does the reverse, because the assets do not belong to

some museum; It belongs to the town. Ie, the application contracts the city towards

the museum, after all, the urban space becomes a large entity with acquis

and dynamics of visitation, where the daily walk is an interactive examination.

In a way, *Streetmuseum* also absorbs the urban context for the museum,

but less deeply because its collection is institutional, not urban.

It seems that both projects are under stress, which results in

rejuvenating experiences. Such applications are constructed differently in space

exhibition and urban space as the first works on the expansion of the museum, and

second articulates the musealization city. The partnership between field

cultural / museum and technology can result in positive relationships and

complementary to traditional dynamic, expanding knowledge in

However, it may mean loss of critical and delivery of the intelligentsia

control of the machine or cultural monopolies.

Figure 21 - Table Expanded Museum, contracting [113]

The works discussed throughout the chapter 3 reinforce the presence of this

contraction and expansion. Extinction ARART and apply to Mixed Reality and show

Expository the medium in different ways, but the essence of the works are in control

and subversion of educational character: both are hostages greater powers

regimented by the computer system applications.

The same applies to the WeARinMoMA projects and *Secrets Behind Paintings* ,

however, the first aims to control the questioning, and

second, its exacerbation through Mixed Reality device: the two

They are under control of a larger system of access and database.

*Streetmuseum* and *Talking Statues* are very similar but their antagonism

It is in the direction of movement of the power: while the former tends to

expand the museum, according to the contracted, pulling himself the urban space. Your

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[113] Source: personal collection.

analysis widened the critical notion of the future of the Middle Expository and perhaps

question the nature of an interactive or participatory environment, and if they

sanam the needs of today's public.

These designs debate on the Expository Half settles in

many forms and expands <> contracted in different directions: into realities

hidden, immersive technologies to urban plan or obscure fields

human desires toward the control and surveillance. It is noticed that the space

It deconstructs through new ways of understanding the exhibition space,

becoming Half. The condition of reality is reviewed, especially with the inclusion

Mixed Reality technology, which indissocia experiences between world

physical and virtual. Time is deployed from the multi-temporality and

endless realities, leading to indissociation of urban and virtual environments. THE

institution is fragmented and contradictory, expands covering the whole city,

in which the Mixed Reality generates a series of antagonisms, for the contraction and

expansion are established through the potential realities.

It is interesting to compare these antagonisms to the structure of a hole

black, which adds a number of energy counterpoints (existence of a

giant matter contained in the smaller space existing in high pressure). It is

the start of the expropriation of the individual conscious reality for a

Mixed reality definitive increasingly powerful.

## 5 CONCLUSION The long or lapse of interactivity

> It is hard to imagine that the human spirit so could function without the conviction that exists in the world has something irreducibly *real* ; and is impossible to imagine how consciousness could appear without giving *meaning* to impulses and human experiences. The awareness
> a real and meaningful world is intimately linked to the discovery of sacred. Through the experience of the sacred, the human spirit captured the difference between what is revealed as a real, powerful, rich and meaningful and which is devoid of these qualities, i.e., chaotic flow of dangerous things, their fortuitous appearances and disappearances and voids
> sense. ( ELIADE 1971: 75).

This quote reflects the values of human consciousness and its refurbishment throughout history, and help build the latter concluding chapter. Against continuous passage through new perspectives space-time, the fourth chapter It was thought to abstract concepts of this research, and therefore proposes an idea lapse. After a survey directed to the use of Mixed Reality institutional spaces, it seemed necessary to think beyond the technological field, artistic and institutional. The real answers began to emerge on analogies with cosmic phenomena and theories that question the science. At this point, I note that the research questions the way art is articulated in Half Exhibition, and this in relation to the domain of large enterprises.

According Santaella [114] , the present time is an anthropological jump without previous, showing the progression of speed since the revolution industrial. Awareness of "irreducibly real" and experiences between the sacred and the mundane are remodeled within the Expository Half issues and Mixed realities. The experience of many realities and the standard sacredness loss generate new "sacred", built on the interface and sensitivity individual / collective.

While the sacred Eliade is provided and limits recognized forms of beforehand, the new perspective of power is by actual on entities outside the palpable limits. It is argued that the current society repositions - a certain scale - their supernatural beliefs to himself, as if the experience ubiquitous / digital omniscient setup a pantheon in the *Cloud* .

[114] Santaella, Lucia. October / 2015. Lecture held at Digital Dialogue Seminar - Arquinterfaces, held at SESI / FIESP SP).

Connectivity expands the world, complements the social relations, enables instant communication, on the other hand, controls, oversees its users, creates an invisible moderating power and access limits. These relationships are always under stress, directing lapses from the counterpoints of networks, flows and contraction movement <> expansion seen in Chapter 3. Thus, the lapse is a kind of hole in the contemporary consciousness, twitching and expands, making the concept of interactive hole. design of the derivative black hole, interactive hole is given by the deformation of the space-mesh time caused by the Mixed Realities.

According Beiguelman [115], the key agent in the art is the critical computer technology, as it is articulated beyond the vigilante system, an open territory to the trials / waste this digital world. When thinking sacred in the field of art, taken up during the process of desanctification works of art and its impact on the museological structures. The existence of museum is linked to the presence of objects in a conservation process human identity, this theme in Chapter 1 of this research.

However, as the tangible traces are lost, identity is transfigured or apparently lost. Here the interactivity lapse if strengthens the artistic and cultural field, since the presence of technology in museum leads to the weakening of the parent institution, while strengthening / expanding museological actions for the bulk, network, whose public spaces, urban and furniture.

This negotiation of meaning meets the perspective of an Empire fear (Virilio, 2012), for binary technology with your data and information not palpable, it seems to threaten the museological field and its identity grounded in "object". So, drive the Expository Half leads to the breakdown of the pillars of space-time and traditional experiences filing.

Comes the contemporary habit of registration, an instant history in the files are stored at every turn by capture devices.

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[115] BEIGUELMAN, Giselle. 1st half / 2015. Lecture held at AUH discipline 5862- Program Post-Degree in Architecture and Urbanism USP.

They are given in circulation, cured and filtered by the system, making them as

unattainable as certain works of art, after all you see is the surface of this

World vigilant network (images, messages, user actions are

controlled). There is a world picture gallery, daily routes and that in

Conversely, consolidate an incessant consumption of the digital image that is

unable to meet the man with the presence of the object, since it is equipped with

its own absence.

In a sharing world, the more interactive actions are

made in exhibition spaces, the more they strengthen the common conscious.

It is assumed that the fear of dictatorship idea, pointed out by Virilio, it

perfectly in this case, it appears the fear of losing the records of the records,

the oblivion of knowledge and identity based on non-object. Builds up

an even greater empathy for the museums, it seems that the

collective and instantaneous records are less legitimate than the pre-culture

established at the Museum: another antagonism which ensures the emergence of the hole

interactive.

Perhaps there is an apparent atmosphere of no control of the data to the point of

company managing a veiled fear of losing their cultural identity in the face of

many sensible realities. But the fact is that there is a total control over the

visual curatorial network, and that's where the fear strengthens the museum and its existence

everywhere. All spaces seem exhibition, the curator is

collective, is instantaneous, it is *Instagram* [116] . While on the one hand, society

feeds the fear of losing their remains (and generates all possible ways)

she surrenders to control vigilant systems, which strains relations

control. Interactive hole is established, as all these forces act

on the sensitive space-time, in fact of mixed strains.

[116]*Instagram* is a social network *online* photo sharing and video that allows its
users to take pictures and videos, apply digital filters and share them in a variety of services
social networks such as Facebook, Twitter, Tumblr and Flickr. A distinctive feature is that it
limits the photo to a square shape, similar to Kodak Instamatic and Polaroid cameras,
in contrast to the relationship the screen aspect ratio of 16: 9 now typically used for cameras
mobile devices. Users are also able to record and share short videos with
lasting up to 15 seconds.

It is a cosmos full of new rituals, built on signs of
virtual power, which Eliade sacred awareness is superimposed by a holy
virtual, all-knowing all-seeing in many possible worlds connection. in this
hole, there are internal and external stresses, explaining the concept of
expansion <> contraction, it sustains the dynamics of movement divergente-
convergent information.

Surge a dialogue between physical art and determined by this interactive hole
It is proposing informational and consciousness lapses. The recent publication of
Stephen Hawking (24 January 2014), " *Information Preservation and Weather*
*Forecasting for Black Holes,* " highlights a particular discussion in the field
sensitive, which reinforces the lapse of interactive hole: the informational dissolution. O
excess lapse and informational capillarity will meet the theory of
Paradox of Information, in which energy and information, into a hole
black, are lost. When it comes to the field of art, the interactivity of the medium
provides an information / relational streaming, which instantly loses
while opening new realities every minute.

The new research on *Big Data* and the emergence of an aesthetic
databases brings up the idea of a collapse of the information. The user gives
realize that your data is in a single domain (just forget a password,
to see the panic your data is inaccessible), activating the awareness
a Mixed Reality essence of contemporary identity, in addition to
applications on the phone. While the information is stored,
they are not widely viewed by the user, and the system runs by itself.

In 1997, Hawking and American physicists John Preskill and Kip Thorne
They made a bet. While Hawking and Thorne believed that all
information deposited in black holes would definitely
lost Preskill argued that nature would have some mechanism yet
stranger who would get it. In July this year, in a
international conference on general relativity, in Dublin, Ireland,
Hawking publicly stated to have changed his mind and, therefore,
black holes would not be irreparable destroyers information.
Although the solution by Hawking is far from
consensually accepted, perhaps, as Dante was able to
return from the depths of Hell, the information at the end, get
escape from the black holes and does not become inaccessible hopelessly
the outer universe. ( CASTAÑEIRAS, Crispino and Matsas in *Scientific*
*American* Brazil, October 2004: 56)

Therefore, the interactive hole is the result of a sum of factors: Medium Exhibition - conditioned by the Mixed Reality - the dynamic insitu <> Influxu and expansion movement <> contraction. The concept of contraction <> Expansion is responsible for interactive hole because Middle relations create this come and go flows. Similarly one black hole is boosted by voltage lines gravitational, expansion and contraction of material (high density in a matter of minimum volume), interactive hole is deformed by a similar context, however linked to the informational and sensitive flow.

Complementary to the field of art, some recently released interface, do think the screen transformation into gestures / presence, and strengthening a Mixed Reality permanent, capable of a gradual control of (in) conscious and intellectual and cultural expansion.

The *bluetooth* , for example, is a simple capable of handling technology actions of an individual (even used as Mixed Reality instrument) case of the recent technology *Beacons* [117] . They are devices recognition, capable of detecting the presence of a particular equipment *Mobile* , sending visual data (advertising campaigns, promotions, call sales etc.) and purchase information (enabling sales via *Beacon,* automatically stores that recognize mobile customers connected via *Bluetooth* ). The control becomes more evident as the equipment adopts complex mediations, hampering Off option of services / devices of this type.

Such devices have many uses in sending information to the passer / user, without giving *start* in one application. Therefore, the *Beacons* reinforce the theory of the Internet of Things, and above all, tend to interfaces vigilant. From here it is no longer a Mixed Reality as tool, but as consciousness, it is not a user action system

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[117]Beacons (or "iBeacons" as Apple insists on calling in an attempt to become synonymous with the category) are [...] the technology " *indoor proximity system* ", or "proximity system indoors." At practice, it allows you to locate objects (or people who carry these objects) much more accurately within indoors. The beacons are for indoors as well as the GPS is for environments external. It is a technology very precise and applicable on a large scale (because of cost) much is said about how they can become points of sale, events, transit systems, buildings corporate, institutions, schools and any establishment where there are people, and smartphones space to circulate. www.impacta.com.br .

on equipment (QRCode reading, for example), but the machine:

*Beacon* exceeds intuitive as it is aware of the subliminal individual reality.

The user is passive agent of a technology, demonstrating the domination system on the subject and the powers of *cloud* above the human free will. This situation is almost similar to a black hole, which disables consciousness. Note that the prospect of Mixed Reality as glaucoma, Virilio (2012), happens to have even more sense.

The Mixed Reality equipment, as noted throughout this Research, mating bodies gradually to internalize and sensors, if the the failed attempt *GoogleGlass* , and the recent launch of *Hololens* , the Microsoft, which the company is

> the first equipment of computer vision able to view holograms in high-definition, bringing life to the physical world, integrating people, places and things. We call this experience Mixed Reality. Holograms mixed in their real world unlock new ways to create, communicate, play and work. [118]

Other projects, such as Oculus Rift and Gear RV, facilitate the establishment of Reality and Virtuality Augmented, and discuss the use of wearable equipment. The *wearables* internalize a new experience of reality and, on the other hand, create an exo condition. A exocorpo a exoconsciência, just as Santaella [119] proposes the idea of a exoimaginário (derived from a exogego) built by the current level of accessibility / interactivity that shapes the space-time.

According Beiguelman [120] , these devices represent interfaces cultural customs relating to human (as well as digital interfaces general). The appearance of these interfaces is related to analog modes act, feel and think in a constant reinvention of the same, since the interface

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[118] Available at: < https://www.microsoft.com/microsoft-hololens/en-us > . Access 01 September 2015. Our translation: *Microsoft HoloLens is the first fully untethered, see-through holographic computer. It Enables high-definition holograms to come to life in your world, seamlessly integrating with your physical places, spaces, and things. We call this experience mixed reality. Holograms mixed with your real world will unlock all-new ways to create, communicate, work, and play.*
[119] Santaella, Lucia. October / 2015. Lecture held at Digital Dialogue Seminar - Arquinterfaces held at SESI / FIESP SP).
[120] BEIGUELMAN, Giselle. 1st half / 2015. Lecture held at AUH discipline 5862- Program Graduate in Architecture and Urbanism USP.

graphic to the very reinventing the museum as Half Expository. Note that

the time in question goes back and forth between past, present and future, either by

reference design, or the relationship between humans and data.

The concept of interactive hole is necessary to delimit this lapse

interactivity gets stronger as the technology abstracts the time to

a mixed time. Physical helps to think the tension forces in the artistic-context

technological, whose systems and networks can function as miniaturization of

cosmic phenomena (quantum physics theory of the hole, *Big Bang* ,

hyperspace, etc.). It is a starting point for future research in

concept abstraction Expository Half and their understanding in other areas

scientific. The idea of a black hole [121] comes to the fore as an interactive hole

that dialogues with the Expository half, showing spaces drives,

times, realities and sensitivity.

According to Jorge Castiñeiras, Luís Crispino and Jorge Matsas (2004) in a

published in *Scientific American* Brazil, the modern concept of black hole

It emerged in the twentieth century: a year after Albert Einstein had completed the theory of

general relativity (1915), the German astrophysicist Karl Schwarzschild found

spherically symmetric vacuum solution; Einstein's equations.

According to general relativity, turning bodies tend to drag the space-

time in the sense of rotation. orbiting particles are directed freely

black hole by gravity according to its rotation. Near the horizon

[121] Timeline: 1783 - John Michell and later Pierre Laplace (1796) conceive
dark stars;
1916 - Karl Schwa zschild is spherically symmetric vacuum solution of the equation
Einstein which includes black holes without rotation; 1916 - Hans Reissner and independently
Gunnar Nordström (1918) obtain the solution of the equations corresponding holes Einstein
static black with electric charge; 1939 - Julius Oppenheimer and Hartland Snyder conclude that
star to collapse, may give rise to black holes; 1963 - Roy Kerr found the solution
vacuum of Einstein's equations for rotation black holes; 1965 - Roger Penrose proof
that within the event horizon of a black hole lurks always a singularity;
1967 - John Wheeler coined the term black hole; 1971 - A group of astronomers and physicists
Experimental observed strong evidence that Cygnus X-1 houses a black hole; 1971 -
Stephen Hawking proves that the sum of the event horizons of areas of a system
black holes never decreases by any classical physical process; 1973 - Jacob Bekenstein
associates entropy to black holes and sets out the Generalized Second Law of Thermodynamics;
1974 - Stephen Hawking discovered that black holes can evaporate quantum; 2004 -
Hawking turns back and says that the information contained in the black hole does not disappear; 2014 -
Hawking says the absence of event horizons.

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Event [122] , there is a region, called ergosphere within which everything, even light, is rotated by gravity. Perhaps the ergosphere sensitive digital world is one egosfera [123] potential that mold the affections of nebulae [124] gives network technology.

According Brain Greene (2001), the black hole has gravitational fields extremely strong that reduce the flow of time speed (higher is the gravitational field, the stronger the curvature of time), thereby A "black hole bends the tissue adjacent the space-time so as intense that anything that passes into your "event horizon" can not escape its gravitational pull. " [125]

In the 1970s, Hawking determined that black holes can evaporate in a process of slow shrinkage, expelling called "radiation Hawking ", where the event horizon would become less than the apparent horizon.

Recently in an online publication from the University of Cambridge, Hawking (2014) questioned the existence of black holes in its structure standard, discarding the notion of an event horizon as the border invisible. This is due to quantum effects around the black hole, which They make so out of space-time that there would be no surface sharp border. Hawking says that "the absence of event horizons means that there are no black holes, to which light regimes You can not escape to infinity. "

The interactive dialogue between the hole and black holes is established by lapse, on three aspects: the unfolding of space (for the exhibition space It is recalculated and the time is not counted in hours, but in information flows

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[122] Known to *the point of no-return* is the theoretical boundary around a black hole from which the force of gravity is so strong that nothing, not even light can escape, for his speed is lower than the exhaust velocity of the black hole. In this field there is a paradox which the laws of physics can not be directly applied as it result in absurd mathematicians.
[123] Santaella, Lucia. October / 2015. Lecture held at Digital Dialogue Seminar - Arquinterfaces held at SESI / FIESP SP), points out that his concept of exoimaginário, part of concept of exoego.
[124] REIS, Abel. October / 2015. Lecture held at Digital Dialogue Seminar - Arquinterfaces, held at SESI / FIESP SP).
[125] GREENE, 2001, p.59.

continuous), resizing the temporal speed (black holes

lengthening the time, so that it becomes ultra slow, in contrast,

Expository means generates an interactive hole, because the inverse function in an

accelerated version, whose time is framed by an acceleration of reality

can slow the interactivity or faster according to the number of screens,

the action of the user, etc.) and the reconstruction of reality / matter (perception

human enters new sensitivity levels; the condition of the black hole

distorts consciousness, matter and reality, in a restructuring of

directions).

The Mixed Reality dialogue with theories of universe and parallel worlds

it simulates temporal overlap by computing process that Virilio

(2012) points as *derealization,* can be understood as a reconstruction of

reality by accelerating time. However this process is strongly

controller:

> The defense of Augmented Reality, which is a ritual in response to
> progress, it is in fact the derealization induced progressive success
> acceleration [...]. This continuous increase in speed led to
> development of a *megaloscopy* that causes a real
> illness can reduce the field of view [...]. The reality
> Increased is a fool game, a televisual glaucoma. [126]

This glaucoma appointed by Virilio is a direct criticism of the reduction

visibility in the critical sense, because the technological immersion results in

limitations of thought covered by subliminaridades system

computer. It is understood that the existence of tailstocks

support digital technology, perceived the artistic and cultural context through

power of questioning of the art field.

The "vision loss", proposed by Virilio, confirms the existence of a hole

field sensitivity (lag another), because as the material converges to

vision narrows. The antagonisms present in Expository Half make it a

potent agent experiences and sensitive control, full voltage lines.

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[126]Virilio, 2012, p. 36. Translation of the author: *the defense audgmented the reality, wich is the ritual reponse progress of advertising, is in fact the derealization induced by the progression of the success in acceleration [...]. Increase in speed continual This has led to the development of the wich megaloscopy Caused has real infirmity because it reduce the field of vision (...) is a reality Augdmented fool's game, the televisual glaucoma.*

This is the point of convergence between physical art and in which realizes the lapse

delimited by the loss of control of sensitive relations. With network affections voltage (nebulae), builds up the interactive hole, which shows the importance of art in realization of system failures and addiction human networks.

On the forces in tension, Agamben (2009) notes the existence of contradictoriness forces when determining subjectivity and desubjectivation, which arise not a spectral subject, a fact that highlights a major paradox: the less subjectivity are constructed between individuals and devices, more devices are created in an attempt to *subject* these same individuals (the same happens on reaffirming the museum / exhibition space: many records informational that are lost in the network, strengthening the object of culture).

The idea of an interactive hole is given also by voltage lines alter the severity of intercourse in an absorbent sensitivity field, destabilizing the space-time. The gravitational stress lines of the hole interactive show Half control centers and an event horizon own. Raúl Niño Bernal (2015) introduces the concept of "event horizon of art "to indicate the boundaries between the deformation and other areas of art knowledge (biology, physics, chemistry, neuroscience, etc.). According to him, this horizon delimits the trade space where relationships become transdisciplinary, and the productions move between different areas knowledge.

There has been a horizon of interactive events in which companies and institutions articulate technologies in the artistic and cultural field, defining new lines voltage control levels, the multi-temporal prediction and an regiments possible chaos veiled. To the extent that the interactor / artist interacts with networks and services strengthens a participatory system of networked shares, destabilize the idea of a single reality. The gravity exerted through the hole confirms the Mixed Reality as a sensitive condition of humanity, not just as a technological tool.

Figure 22 - The black hole and its severity [127]

The interactive hole has two types of power lines, which
determine the functions of media: internal and external. The internal occurs within the
structure of the exhibition space, and especially in the field of management. It is the
Computer insertion in museum structure (collection / visitation mode), or
are institutionalized tools to streamline exhibits such as
WeARinMoMA, *Secrets Behind Paintings* , *Streetmuseum* . The external occurs outside
in and is represented by the interests of large information technology companies
in exhibition spaces. These are the organized computational tools
by computing monopolies if projects like Google *Art Project* , the
Google *Art Gallery* and *Cardboard* . The outer voltage control lines make
outside the limits of the institution, because it is not more power manager (space
exhibition), but its functionality while handling component
informational. The inconsistency caused these factors generates a type of action

[127] Source: personal collection.

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gravitational about the public, the work and the Environment (confirming the proposition
public relations <> work <> The present study).

The idea of a contraction <> Expansion forces, generating lapses space-

temporal theories conversation with the *Big Bang [128]*, *Big Crush [129]* and *Big Baunce [130]*,

in which matter can contract and expand in an explosion in other

universal dimensions, or in the opposite direction of the present time (back in

time).

The theory of the *Big Crush,* takes into account the expansion of the universe given to

point from which the cosmos contracts and the time back in their own

unidirectional, ie back in time to the zero moment (one *crush* on

system). This theory can dialogue with a common habit in the world

contemporary: the delete files. The act of deleting a file and retrieve it,

or miss an issue and undo it, creates a new time condition for

mankind, which becomes partially manipulate their experiments with sensitive

the time.

The *Big Baunce,* assumes another hypothesis (here applied to the convergence

flows), which provides a kind of recycling universes, not

Explosion / emergence of new (as proposed by the *Big Bang)* . Thus, the *Big*

*Baunce* is a result of the passage of an old universe to a new dimension.

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[128] The proposal of the Big Bang (or Big Bang) was initially made by the priest and cosmologist Belgian Georges Lemaître (1894-1966), a theory that when exposed claimed a sudden onset to the universe. However, over time the possibility of the Belgian cosmologist started take shape in 1929 when the spectral lines of light from galaxies observed at the observatory Mount Palomar by Milton Humason La Salle began to show a gradual removal to the most distant galaxies, with characteristics of a universal expansion. translated into This discovery allowed the numbers astronomy Edwin Hubble fit an arithmetic progression which was later called the Hubble Constant. To date this arithmetical ratio is the rule cosmic, indispensable tool for confirmation of the theories of astronomers and cosmologists whole world. Available at: < https://antesagoraedepois.wordpress.com/evolucao-cosmica/teoria-the-big-bang /> . Accessed on: 05 July 2015.

[129] This theory said that in the future, the universe will begin to contract due to attraction gravitational, to collapse on itself, with a reversal in returning time this zero. Available in: https://antesagoraedepois.wordpress.com/evolucao-cosmica/teoria-do-big Bang/. Accessed: 05/07/2015.

[130] One hypothesis of the Big Bounce predicts that the universe before the Big Bang was the opposite of our, that is, it would be a universe in contraction. This contraction would occur until the density the space-time atoms were such that promote rapid expansion, called the Big Bang. Available at: <http : //omicroemacro.blogspot.com.br/2009/03/big-bang-nao-big-bounce.html >. Access on 07 Jul. 2015.

One might think that the interactive hole is recycled constantly new

sensitive universes, from the realities experienced by the user. With the use of

Mixed reality, this perspective widens and refers to Dual experience

Slot [131] in which a conditioned electron going through two slits (an OU

other), goes through both simultaneously creating a new universe for each

possibility. This means that a choice triggers multiple universes

each action (potential), a fact that often occurs in the virtual plane where the

actions may come and go in time user experience.

As many realities are woven, you see the indissociation

physical and virtual world, which may be complementary or mirrored: a

Mixed Reality complements the relationship of the physical world, it adds layers

realities; Virtual Reality, in turn, counteracts the physical world (case

Matrix), proposing an independent consciousness. However, resuming

features "CTRL + Z" and " *Delete* ", you can review the Arrow's theory

time [132]         which reinforces the idea of temporal one-pointedness. Part from the

assumption that the digital universe has a multi-time, so is a

reflex (mirrored / opposed) to the physical plane, whose time is unidirectional.

While the physical time is no return (uni), the virtual is endowed with multiple vectors

offset, in which are embedded commands to restore files,

recover data, user traces the, etc. Thus, it is also possible

dialogue with the theories of universe Mirror [133] , hyperspace, the multiverse,

universes parallel relationships that merit further in a deepening

future research.

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[131] The many-worlds interpretation developed in the 1950s by Hugh Everett, who was then a graduate student at Princeton University in New Jersey. In the picture of many worlds, the wave function governs the evolution of reality so deeply that, whenever made a quantum measurement, the universe splits into a parallel copy. Available in: < Http://www.misteriosdouniverso.net/2015/05/fisica-quantica-o-que-e-real-eo-que.html> .

[132] Time flows in a well-defined sense, the most dramatic manifestation is our biological aging. Surprisingly, the inclusion of this fact of reality (the "arrow of time ") in theoretical physics ideas was one of the major problems of the past hundred years. If Leaving aside the very small forces linked to the beta decay of nuclei, theories fundamental physical place past and future in symmetrical situations. Available at < http://www.hfleming.com/tempo.html >. Access on 01 Jul. 2015.

[133] If the Big Bang really happened the way that books teach, this theory assumes that, in time of the explosion, was created another universe temporally opposite to ours. That is, a universe mirrored, identical, that has all the laws of physics, such as relativity or gravity, but with a reverse timeline. Available at: <http://charivari.pt/2014/12/11/sera-que-tempo-anda-sempre-em-frente-a---universe theory mirrored-say-what-not / >. Access on Aug 12. 2015.

Interactive hole remodeling time and adds the physical time (based on

concept plan / physical world, while the tangible present time user) +

the virtual time (determined as the time of interactivity, shaped by
the individual network links), resulting in mixed tense (present in the use

Mixed Reality functional, or conceptual in its application). The time is mixed

endowed with multidirecionalidade along the Mixed Reality opening windows

sensitive dimensions.

Figure 23 - Joint Time [134]

This conclusion runs several concepts (Half Expository, insitu <> Influxu, cycle

public <> work <> means, expansion <> contraction) to observe the interactive hole.

There were several steps that began in dialogue with

computing / mathematics, permeated museology / expography entered the

concept of Mixed Reality, built the Expository Half and concluded in

physics theories to better understand the relationship between technology and sensitivity

in the art. Interactive hole provides a possible informational-sensitive collapse, review

prospects spatiotemporal and understanding of reality, in a

own gravity flows (insitu <> Influxu / expansion <> contraction).

[134] Source: Personal Collection.

The Expository medium itself becomes just the tip of the *iceberg* of other

new issues pertaining to construction of the human sensory. All these points

They are directly linked to the art field, which is now at a level structure

critical of the digital interface, building participatory possibilities. The aesthetic questions and theoretical reflections within the exhibition spaces, They are when they become enriched media. At the same time, it transpires a fear empire veiled, loss of identity and control the technology.

The discussion about the Expository Middle and interactive hole (as early a lapse in human sensitivity) discloses the replication and duplication of quantum phenomena in the microcosm of the network sensitivity. consolidates, therefore, a permanent Mixed Reality, whose impact on society is greater than you think, to throw open the continuous mixed condition of experiences contemporary.

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