

NEW MEDIA ART'S TRANSITIONS FROM FESTIVALS TO MUSEUMS
TRANSITIONS FROM TEMPORARY EXHIBITION MODELS TO MUSEUM
SHOWS AND COLLECTIONS



GÖZDE DİNLER

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PLAGIARISM

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

In this thesis, the effects of technological innovations that emerged with the possibilities of new media on artists, institutions and art in general are examined. The works of the artists who use technology and make experiments by collaborating with engineers were mentioned, and various events such as festivals and symposiums that paved the way for these experimental studies are mentioned. It is thought that the relationship of new media art with festivals and art institutions will give a general idea about how new media art has been taking its place in mainstream art.

With the reshaping of societies by new media, institutions have also begun to change. These changes in the art environment have also led art museums to an inevitable change. In this context, new museology is a concept that needs to be mentioned. Today, with the emergence of important art investment platforms such as NFT, a new channel is formed for artists in the digital field in terms of exhibition, auction and sale of works. In this context, collection and copyright issues were also investigated in the thesis.

Key Words: *New Media Art, Museum, Art Institutions, Art Management, New Media Artists, Digital Art, Computer Art, NFT.*

ÖZET

Bu tez çalışmasında yeni medyanın olanaklarıyla ortaya çıkan teknolojik yeniliklerin sanatçılar, kurumlar ve sanat üzerindeki etkileri incelenmiştir. Teknolojiyi mühendislerle bir araya gelerek deneyler yapan sanatçıların işlerinden bahsedilmiş, yapılan bu deneysel çalışmaların önünü açan festivaller, sempozyumlar gibi çeşitli etkinliklerden bahsedilmiştir. Yeni medya sanatının festivaller ve kurumlarla olan ilişkisi ve süreci incelenerek yeni medya sanatının ana akım sanat içerisinde kendine nasıl yer edindiği hakkında genel bir fikir vereceği düşünülmüştür.

Toplumların yeni medyayla yeniden şekillenmesiyle kurumlar da değişmeye başlamıştır. Sanat ortamında da ortaya çıkan bu değişiklikler sanat müzelerini de kaçınılmaz bir değişime sürüklemiştir. Bu kapsamda yeni müzeoloji bahsedilmesi gereken bir kavram olmaktadır. Günümüzde NFT gibi önemli sanat yatırım platformlarının da ortaya çıkmasıyla dijital alanda sanatçılar için hem sergileme hem müzayede hem de eser satışı konusunda yeni bir mecra oluşmaktadır. Bu bağlamda tezde koleksiyon ve telif hakları konuları da araştırılmıştır.

AnahtarKelimeler: *Yeni MedyaSanatı, Müzeler, SanatKurumları, SanatYönetimi, Yeni MedyaSanatçıları, DijitalSanat, BilgisayarSanatı, NFT.*

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TABLE OF CONTENTS

PLAGIARISM	i
ABSTRACT.....	ii
ÖZET	iii
ACKNOWLEDGMENT.....	iv
TABLE OF CONTENTS.....	v
LIST OF FIGURES	vii
ABBREVIATIONS	ix
1. INTRODUCTION	1
2. UNDERSTANDING NEW MEDIA IN THE CONTEXT OF OLD / ANALOGUE MEDIA	3
2.1. The Main Characteristics of New Media That Distinguish From Old / Analogue Media.....	9
2.1.1. Digital	9
2.1.2. Interactive	10
2.1.3. Hypertextual	11
2.1.4. Networked	12
2.1.5. Virtual.....	14
2.1.6. Simulated.....	15
2.2. Principles Of New Media.....	16
3. THEORIES, DEFINITIONS AND HISTORY OF NEW MEDIA ART.....	19
3.1. Theories And Definitions of New Media Art.....	20
3.2. History Of New Media Art.....	30
4. INCREASING VISIBILITY OF NEW MEDIA ART WITH FESTIVALS AND ITS RELATIONSHIP WITH INSTITUTIONS	36
4.1. Festivals & Events.....	41

4.1.1. SIGGRAPH (1969 -)	41
4.1.2. Ars Electronica (1979 -)	43
4.1.3. README (2002 - 2005)	45
4.2. Institutions (Galleries and Initiatives)	48
4.2.1. ZKM (Germany, 1989 -)	48
4.2.2. ISEA International (The Netherlands, 1990 -)	51
4.2.3. NTT InterCommunication Center (ICC) (Japan, 1990 -)	53
4.2.4. The Walker Art Center (USA, 1879 -)	55
4.3. Museums	56
4.3.1. Whitney Museum of American Art (USA, 1930 -)	56
4.3.2. San Francisco Museum Of Modern Art (USA, 1935 -)	58
4.3.3 New Museology	60
4.3.4 Collection	62
4.3.5 Copyrights	64
5. CONCLUSION	72
REFERENCES	74

LIST OF FIGURES

Figure 1: Refik Anadol – Melting Memories Exhibition, 2018, Pilevneli Gallery, ..	24
Figure 2: Refik Anadol – Melting Memories Exhibition, 2018, Pilevneli Gallery, Retrieved from	24
Figure 3: Refik Anadol, Machine Memories Exhibition, 2021, Retrieved from.....	25
Figure 4: Bager Akbay, Deniz Yılmaz, 2015, Retrieved from	27
Figure 5: Bager Akbay, Deniz Yılmaz, 2015, Retrieved from	28
Figure 6: Bager Akbay, Deniz Yılmaz, 2015, Certificates of 17 sold works being signed at Contemporary Art Fair. Retrieved from	28
Figure 7: Orginal Pepsi-Cola Pavilion. Retrieved from	33
Figure 8: Digital rendering of the Pavilion. Retrieved from.....	33
Figure 9: Homage to New York - 1960 collaboration with Jean Tinguely. Retrieved	34
Figure 10: Oracle - 1962/65 collaboration with Robert Rauschenberg. Retrieved ...	34
Figure 11: Silver Clouds - 1966 collaboration with Andy Warhol. Retrieved from .	35
Figure 12: 9 Evenings - 1966 Robbie Robinson and John Cage. Retrieved from.....	35
Figure 13: Experiments in Art andTechnology (EAT) at the annual meeting of the	36
Figure 14: SIGGRAPH 1981: Computer Culture Art Show 81', Star Van Der Beek, Cosmos-1, 21x21 cm, 2D wall hang. Retrieved from.....	42
Figure 15: SIGGRAPH 2020: Think Beyond Algotecton I, installed in the EX_CHANGE exhibition, College of Fine Arts, Carnegie Mellon University, May 2019. Computational Design Laboratory, Carnegie Mellon University, 2019. Daniel Cardoso Llach, Jingyang Liu, and Yi-Chin Lee. Retrieved from.....	43
Figure 16: Ars Electronica 2019, Internet of Everything: All Connections / Shaun Hu (CN) / photocredit: Shaun Hu / Printversion / Album Retrieved from.....	45
Figure 17: Ars Electronica 2019, Mechanically controlled eyes see the controlled eyes in the mirror looking back / QIU Yu (CN) / photo credit: QUI YU / Printversion / Album Retrieved from	45
Figure 18: ZKM Center for Art and Media Karlsruhe. Photography: Uli	49
Figure 19: ZKM Hertz Lab Exhibition: Open Codes, Bernd Lintermann, YOU:R:CODE, 2017, Photography ZKM Karlsruhe, photo: Jonas Zilius. Retrieved	51

Figure 20: NTT InterCommunication Center (ICC), Open Space, 2015, Photography	53
Figure 21: HIVE Website. Retrieved from https://www.ntticc.or.jp/en/archive/hive/ link accessed 06 July 2021.....	54
Figure 22: The galleries in T. B. Walker's home, circa 1904. Retrieved from.....	55
Figure 23: Jeremy Blake, Station to Station. Digital animation (work in progress) in BitStream exhibition. Courtesy of Feigen Contemporary. Retrieved from	57
Figure 24: Chris Finley, Goo Goo Pow Wow (2000-2001) shown by SFMOMA at 010101: Art in Digital Times. Retrieved from.....	59
Figure 25: Bleep, Everyday: The First 5000 Days, non-fungible token (jpg) 21,069 x 21,069 pixels (319,168,313 bytes) Minted on 16 February 2021. Retrieved from...	68



ABBREVIATIONS

HTML: Hypertext Markup Language

HTTP: Hypertext Transfer Protocol

NSFNET: National Science Foundation Network

WWW/W3: World Wide Web

AOL: America OnLine

WAIS: Wide Area Information Service

USA: United States

ICOM: International Council of Museums

MDPP: Museum Definition, Prospects and Potentials

CD-ROM: Compact Disc Read-Only Memory

CD: Compact Disc

DVD: Digital Versatile Disc

TV: Television

VR: Virtual Reality

PSD: Photoshop Document

JPEG: Joint Photographic Experts Group

MS: Microsoft

DOC: Text Or Binary File Format For Saving Documents

RTF: Rich Text Format

GPS: Global Positioning System

EAT: Experiments in Art and Technology

IEEE: Institute of Electrical and Electronics Engineers

IFIP: International Federation for Information Processing

ACM: Association for Computing Machinery

SIGGRAPH: Special Interest Group on Graphics and Interactive Techniques

UK: United Kingdom

ZKM: Center for Art and Media Karlsruhe

ISEA: International Symposium on Electronic Art

AR: Augmented Reality

AI: Artificial Intelligence

R&D: Research and Development

ICC: NTT InterCommunication Center

HfG: University of Art and Design Karlsruhe

SFMOMA: San Francisco Museum of Modern Art

NFT: Non-Fungible Tokens

1. INTRODUCTION

This thesis aims to comprehend new media art, to show its relationship and differences with traditional media, to talk about the principles, history, theory, and definitions of new media art, to convey the transition of new media art from festivals and events to museums, and to examine this process with a broad perspective through festivals and institutions.

The subject of this study has been decided upon the realization that the progression of new media art until today and the process of its integration into mainstream art cannot be ignored. In this direction, firstly, the concept of new media is discussed in the context of traditional media and is tried to be conveyed in a comparative manner. Afterwards, new media is aimed to be better understood, in line with its characteristic features that distinguish it from traditional media; and via its digital nature, interactivity, hypertextuality, networking, virtuality and simulated subheadings, and its principles.

By referring to the theory, definitions and history of new media art, the theoretical side of it is aimed to be conveyed in the context of the unification of the developing technologies and art. The subject has been dealt with chronologically, by taking into consideration its history.

The aim of the study is to show the increasing visibility of new media art through festivals and events and gaining momentum via symposiums, workshops, conferences, and competitions. What is envisaged in the future is that new media art will be integrated into mainstream art with galleries, museums, and various art institutions, and that it will be accepted in this field, in particular by institutions and

audiences.

What has become evident during the research period is that this thesis will be a considerable contribution to the existing literature, by eliminating the lack of an academic study in the context of integration of new media art into mainstream art in Turkey. It is seen as an important step that the thesis is an additional source for the research on new media and new media art to be made later.

For this thesis to reach its intended goals, a structure from general to specific has been designed and the main findings related to the above-mentioned issues are presented accordingly.

2. UNDERSTANDING NEW MEDIA IN THE CONTEXT OF OLD / ANALOGUE MEDIA

Natural transformation processes in the world also affect communication media and tools. When we look at the development process of communication, this transformation can be easily seen. From human communication to today's most complex communication mechanisms and environments, there has been a significant transformation. Although there has been a serious change between the beginning and the end in the thousands of years of this transformation, the basic need for communication and information has never changed.

The adjective “new”, should not be treated in a semantic approach within the term new media. The “new” referred to here is not new, in the sense of what becomes old the next day with the emergence of a new one each time. In other words, *new* is not used as the antonym of *old*. In this context, what is new does not reject the old. At the same time, the new is not to legitimize itself by using the old; rather, it is built upon the old. Therefore, it is possible to find the old in the new. The adjective “new” denotes a process that includes transformation.

“At this point, what needs to be underlined is that the adjective “new” here essentially describes the word environment. It is not actually the phenomenon of communication that has been transformed; but the communication medium itself. It is possible to define this medium that we are talking about as an object or tool used to communicate a message with informational value by conveying it in time and/or space.” (Öğüt, 2004, p. 4).

New media transforms not only the content but also the source, the user, the traditional media and even itself. The innovation emphasized in the concept of new media is that each element in the communication model undergoes continuous and mutually triggering transformations and the ability to stay new.

The structures that started with the transformation of the elements in the communication model and turned into networks created hypertextual digital representations, digital representations created computerized electronic systems, and electronic systems created smart new media, allowing media to transform content and contents transform effects. Thus, all transformations both transformed individuals and determined the direction and speed of these transformations. In Latin, the word “media”, the plural of 'medium', means 'environment' and 'tool'. The word “medium” also refers to the environment in which information is transmitted.¹

The term also referred to the cultural and material products of those institutions (the distinct forms and genres of news, road movies, soap operas which took the material forms of newspapers, paperback books, films, tapes, discs etc.) (Thompson, 1971, p. 23–24).

¹“Marshall McLuhan (1911-1980) was a philosopher of communication theory who coined the expressions ‘the medium is the message’ and the ‘global village’, and for predicting the World Wide Web almost thirty years before it was invented.” (Levinson, 1999).

“Marshall McLuhan indicates his concern about the communication medium in 1964 would cause global television networks and industrial societies (McLuhan, 1994). The phrase “Medium is the message” refers to changing the way to communicate with the transformation of mediums by electricity. McLuhan explores how new environments, particularly television, affect the messages we produce. His focus is on the eligibility and nature of the materials used in the expression of messages (McLuhan, 1994, 12). It can also be indicated that this idea derives from concerns in the art world. Cubist, Futurist, Dadaist, and Bauhaus views focus on the properties of different materials in art-making (Bunulday, 2001; Genesko, 1999). Which in turn, reveals the discovery of qualities of materials in late modernism and the exploration of mediation and intermediality as previously mentioned by conceptual artists and American pioneering innovative circles.” (Köroğlu, 2012, 11)

The first communication tool, which is important for the change in the communication process, is the telegraph, as it separates the message from the carrier and trivializes long distances. However, before the telegraph, a large communication system that started a new era must be addressed: the printing press. Apart from separating the message from the carrier and trivializing long distances like the telegraph, its most basic feature is that it can be reproduced and repeated in large quantities.

“Newspapers, which became possible with the printing press, became not only a new communication system but also a central social institution in interaction with social changes over time. With the printing press and mass newspapers, information has transformed from being something collected, owned and stored in churches and libraries to something public that can be shared.”
(Capurro, 2003). (Aydoğan&Başaran, 2012, p. 3).

The telegraph, which removes the message from being dependent on its carrier, is related to the organization of the social communication process in general, and in particular to journalism, which has become a central social institution. The telegraph was incorporated into the news transmission process shortly after its invention. News agencies, established to share the costs of accessing telegraph and other news transmission methods and partnering with telegraph companies, are examples of this articulation.

“Of course, the way the telegraph developed as a social communication technology was shaped by pre-existing dynamics. However, societies and social institutions took new forms through the telegraph, like all modern

means of social communication, from modern newspapers to photography, cinema, radio, and television. It should be noted here that it is a mutual determination and interaction rather than a one-way determination of the relationship of technological developments with social institutions. (Aydoğan & Başaran, 2012, p. 3).

In this framework, communication technologies have accelerated the emergence of the social communication model, which we refer to as mass communication, by being incorporated with previous forms of communication and combined with rapid social changes. Mass communication has led to the loss of the old local, time-space dependent system and its replacement by a new concept of time and space.

The invention of photography (1826) coincides with the beginning of the public use of the bicycle, the steamship, the railroad, the automobile and finally the airplane.

“Photography, fixed and recorded our world, making it consumable in newspapers and all other printed media, together with writing. While photography stabilized images, the phonograph (1877) was invented as a device for stabilizing the voice and music and was made available to the public.” (Aydoğan & Başaran, 2012, p. 4).

With the advancement of technological developments in the 1970s, the emergence of digital technologies has become such that computers could process, store, and transmit information by digital processing.

The 1990s are important for the development of the internet. It is the years when two technological developments, the web and the first commercial web browsers, which are considered to be effective tools in reaching the present form of the network, were developed. The web is a European-based technological development and Tim Berners-Lee, one of the creators of the web, stated that this technological development, called “WWW/W3”, is designed as “a pool of information where collaborative people can share their ideas and/or all aspects of a common project”.

“At the European Center for Nuclear Research, Tim Berners-Lee and Robert Cailliau developed a document format called HTML, a linked text sign language, and a linked text transfer protocol called HTTP, based on the idea of linking data from different computers. As a result of these two developments, it was possible to add data in different media formats such as pictures and graphics on the same page to the texts presented over the internet, and to associate the texts on the network with each other; internet has gained multimedia and connectivity qualities”. (Aydoğan & Başaran, 2012, p. 10).

Before the development of the web, commercial organizations such as AOL and Prodigy (Başaran, 2010. p. 154), which provide online services to internet users on the network, as well as NSFNET, had also developed interfaces containing images using the graphical features of personal computers. Systems such as Gopher and WAIS were used to find content on the network among subject directories before the web. Therefore, even before the development of the web, connectivity and multimedia features could be used on the internet, albeit to a certain extent. The development of

the web, on the other hand, made it possible to completely eliminate the technological limitations in front of these two features and allowed them to be used on the same page (Abbate, 2010. p. 475-476). This technological development, which emerged at CERN, was developed by Vannevar Bush in the USA, and announced to the world public opinion in 1991 (Başaran, 2010. p. 152).

The term “New Media” was first used in the 1990s by major names in the broadcasting business. The aim here was to distinguish between those who produce interactive CD-ROMs and websites, and relatively more traditional platforms such as radio, newspaper and television, which are newly opened sections. With this distinction, the expression “New Media” has a meaning more closely related to digital media than any new media. This interpretation of "New Media" has also led media theorists and art theorists to bring new interpretations.

“According to Manovich, “new media” became a conceptual category when computers first began to be used not only to produce, but also to store and distribute contents. New Media is therefore the result of the encounter between two technologies which came into being in the same period: mass media and data processing. This encounter changed the identity of the media as much as that of the computer, transformed from simple calculator into a “media processor”.” (Quaranta, 2013. p. 27-28).

Mark Poster, one of the theorists dealing with the new media issue, explains the main difference between old media (old broadcast media) and new media: "new media is 'active', whereas old media is 'passive'". (Poster, 1995.). The reason why old media is defined as passive in this expression is that the production of old media and

the way information is processed and transmitted is one-sided, producer sourced. The expression of being active in the new media stems from its interactivity, which is one of its important characteristics and one of its main features.

2.1. The Main Characteristics of New Media That Distinguish From Old /

Analogue Media

From the mid-1980s and later with new updates, various concepts have come to the fore, suggesting how the new media field differs from the old media in terms of production, distribution and consumption, offering to describe its main features as a whole. According to Lister, Dovey, Giddings, Grant and Kelly these are digital, interactive, hypertextual, virtual, networked, and simulated.

The above-mentioned characteristics and principles of new media facilitate the categorization of new media art within institutions and are the features that distinguish new media art from other art forms. The distinction between whether a new media artwork is a medium or a tool can be characterized by these basic features.

2.1.1. Digital

Unlike the analog being continuous and sensuous, digitality consists of two states and is fragmentary. These two states are referred to as 'open' and 'closed'. The binary system corresponding to this expression in numerical terms is 1 and 0. All the data processed by the computer are codes in different sequences formed by these two

numbers. Thus, computer generated sound, moving image, etc. occur thanks to the codes that consist of the numbers 1 and 0 appearing in different sequences.

Differences between Analogue and Digital is described as follows,

“Analogue media tend towards being fixed, where digital media tend towards a permanent state of flux. Analog media exist as fixed physical objects in the world, their production being dependent upon transcriptions from one physical state to another. Digital media may exist as analog hard copy, but when the content of an image or text is in digital form it is available as a mutable string of binary numbers stored in a computer’s memory.” (Lister & Dovey & Giddings & Grant & Kelly, 2008. p. 19).

2.1.2. Interactive

Interactivity is directly linked to the production and consumption stages and is one of the main characteristics that distinguish new media from analog media. While the old media implies a passive consumption, that is, it leaves the user only as a receiver in the communication process, the new media makes both a source and a receiver out of the user. At the same time, there is no need for another communication tool, as in analog media, while reaching the source. Martin Lister's view on interactivity is as follows:

“In this context, being interactive signifies the users’ (the individual members of the new media ‘audience’) ability to directly intervene in and change the images and texts that they access. So the audience for new media becomes a ‘user’ rather than the ‘viewer’ of visual culture, film and TV or a ‘reader’ of literature. In interactive multimedia texts there is a sense in which it is

necessary for the user to actively intervene; to act as well as viewing or reading in order to produce meaning.” (Lister & Dovey & Giddings & Grant & Kelly, 2008. p. 22).

Defining new media with principles, Manovich did not include interaction within these principles. According to Manovich, reaching the contents on CD/DVDs by clicking or stopping and starting videos is defined as interaction. In addition, the choose and watch / listen option offered on cable TVs, video streaming platforms such as Netflix, or music streaming platforms such as Spotify is also a form of interaction. Since these components cannot be defined correctly, they are misread in the new media and the new virtues in the new media cannot be appreciated properly. Reducing the most important virtue of new media to clicking a menu or starting/stopping a video do not create positive results for new media literacy either. What is important in interaction is the manipulation of the content and through this manipulation, the creation of a structural, formal and behavioral change.

2.1.3. Hypertextual

According to Burnett, hypertextuality is ‘the extension of an existing text into other areas and other domains’ (Burnett & Marshall, 2003. p. 83–4). Hypertextuality encompasses many different media formats (such as audio, motion pictures, photographs) and connects these contents to an interactive, associative network. It is closely related to interactivity. It has examples that are perhaps most influential in the context of participatory arts: While the World Wide Web is the largest and most

common example in existence, Hypertext is typically written in HyperText Markup Language (HTML).

“Hypertext is generally understood as a computer-based non-linear group of texts (i.e., written text, images, etc.) that are linked together with hyperlinks. The term was first coined by Nelson (1965), who described it rather roughly as “a series of text chunks connected by links which offer the reader different pathways.” (Steensen, 2015, p. 3)

2.1.4. Networked

The opinions presented for the feature that we can call networking or bonding in new media are as follows:

“Connectivity is defined as the degree to which different parts of a content can be related to each other and to other content through different connection points.” (Paulussen, 2004. &Deuze, 2001.).

Francisco J. Ricardo expands the connectivity feature in the following manner:

“The Internet consists of several separate but interconnected networked spaces, each consisting of thousands of individual networks. These spaces are all linked through common communication protocols (i.e., ways of exchanging information). Intranets have the same general architectural form as the Internet, allowing the transfer of multimedia data, but are private, corporate networks linking the offices, production sites, and distribution sites of a particular company or group of linked institutions around the world. These are

closed networks; using specific lines leased from telecommunications providers, with no, or very limited, public access to files.” (Ricardo, 2008. p. 71).

Lister and his colleagues summarize the subject as follows:

“In summary, new media are networked in comparison to mass media – networked at the level of consumption where we have seen a multiplication, segmentation and resultant individuation of media use; dispersed at the level of production where we have witnessed the multiplication of the sites for production of media texts and a greater diffusion within the economy as a whole than was previously the case. Finally, new media can be seen as networked rather than mass for the way in which consumers can now more easily extend their participation in media from active interpretation to actual production.” (Lister & Dovey & Giddings & Grant & Kelly, 2008. p. 35).

In regard to its connectivity feature, Françoise Sabbah expresses the difference between the new media and the old media as follows:

“The new media determine a segmented, differentiated audience that, although massive in terms of numbers, is no longer a mass audience in terms of simultaneity and uniformity of the message it receives. The new media are no longer mass media ... sending a limited number of messages to a homogeneous mass audience. Because of the multiplicity of messages and sources, the audience itself becomes more selective. The targeted audience tends to choose its messages, so deepening its segmentation...” (Sabbah, 1985. p. 219. quoted

in Castells, 1996. p. 339) (Lister & Dovey & Giddings & Grant & Kelly, 2008.).

2.1.5. Virtual

Virtual is a concept that comes from the Latin 'virtualis', which expresses the state of creating the illusion that something that does not exist exists by directing the perception. Virtual Reality, on the other hand, is based on the principle that the viewer or user is included in an artificially created image space, in an editable time structure and interacts with it at a later stage. It is an environment that consists of technological tools such as devices that reproduce sensory effects just as power, motion and touch by simulating various data input and output technologies, and three-dimensional image and sound devices.

Lister and his colleagues talk about two types of virtuality:

“One is produced by technological immersion and the other one is computer generated imagery and that imagined space generated by online communications.” (Lister & Dovey & Giddings & Grant & Kelly, 2008. p. 37).

“The ‘virtual reality’ experienced by the wearer of the apparatus is produced by immersion in an environment constructed with computer graphics and digital video with which the ‘user’ has some degree of interaction. The movies imagine a condition where human subjects inhabit a virtual world which is mistaken for, or has replaced, a ‘real’ and physical one. Second, alongside these immersive and spectacular forms of virtual reality, another influential

use of the term refers to the space where participants in forms of online communication feel themselves to be. This is a space famously described as ‘where you are when you’re talking on the telephone’.” (Rucker, 1993. p. 78). “Or, more carefully, as a space which ‘comes into being when you are on the phone: not exactly where you happen to be sitting, nor where the other person is, but somewhere in between.” (Mirzoeff, 1999. p. 91). (Lister & Dovey & Giddings & Grant & Kelly, 2008. p. 36).

Francisco J. Ricardo's views on Virtual Reality are as follows:

“Virtual reality technologies partially or totally immerse users in an interactive, visual, artificial, computer generated environment. Instead of being spectators watching a static screen, users participate in an environment that responds. Virtual reality has three essential components: it is inclusive; it is interactive; and the interaction is in real time.” (Ricardo, 2008. p. 71).

2.1.6. Simulated

According to Lister, in digital culture, virtuality and simulation are closely related to one another.

“As Shields has pointed out (2003. p. 46) in the digital era the meaning of ‘virtual’ has changed. Where, in everyday usage, it once meant a state that was ‘almost’ or ‘as good as’ reality, it has now come to mean or be synonymous with ‘simulated’. In this sense, rather than meaning an ‘incomplete form of reality’ it now suggests an alternative to the real and, maybe, ‘better than the real’. (Lister & Dovey & Giddings & Grant & Kelly, 2008. p. 36).

“A simulation is certainly artificial, synthetic and fabricated, but it is not ‘false’ or ‘illusory’. Processes of fabrication, synthesis and artifice are real and all produce new real objects. A videogame world does not necessarily imitate an original space or existing creatures, but it exists.” (Lister & Dovey & Giddings & Grant & Kelly, 2008. p. 38).

2.2. Principles Of New Media

Lev Manovich, who published his book 'Language of New Media' with MIT Press in 2001, takes the developments that prepared the emergence of new media back to the 1830s. In his book *The Language of New Media*, Manovich, unlike Lister and his friends, defines New Communication Media (NCM) with five basic principles: Numerical Representation, Modularity, Automation, Variability, Transcoding. (Manovich, 2001. p. 27-48). Necmi Emel Dilmen and Sertaç Öğüt defines these principles as follows:

- **Numerical Representation**

Numerical representation is the environment that consists of codes, that is, mathematical symbols and algorithms. Thus, all data in the new environment becomes countable and programmable and behaves more consistently.

- **Modularity**

Modularity is directly related to the way new environments are presented. If we take a web page as an example, elements such as images, sounds and text have separate properties. When it is desired to make a change on the web page

created by these components, modularity is brought by making changes on each element separately.

- **Automation**

Automation represents the activities that NCM can produce without the presence of the user. For example, word-processing programs can generate an invitation with a "click" of the user or create an album of photos with a command.

- **Variability**

Variability is an extension of numerical representation and modularity. NCM makes it possible to present objects that are very strictly separated from each other in different ways as extensions of the same object. In other words, it is possible for the existing object to appear in more than one form.

- **Transcoding**

Transcoding represents the two main layers of new environments: the social layer and the computing layer. With the traditional media production and broadcast being handled by computers, past cultural judgments have also entered into a transition with computers. It also covers the conversion of digitized data from one format to another. As it is known, the computer world is divided into two as hardware and software. Softwares are structures that consist entirely of code. An image file produced in Photoshop has a certain form and has a unique format. This and similar formats are defined by file extensions. The format of the file created in this example is PSD. This format can be converted to the very common JPEG format by the same software. A similar example can be given for the word-processing software MS Word. The format extensions of these files, which are produced and stored as text

documents, are known as DOC / RTF. However, switching between formats is possible. For example, it is possible to import an image in JPEG format by creating a text document. When the file is produced, it will be stored in DOC / RTF format. Thus, a transcoding takes place between DOC, which is originally a text document format, and image formats.” (Dilmen & Öğüt, 2006, p. 7)

With these basic principles, new media has a digital character. In other words, all data is definable and measurable. In line with these principles, the definition of content in new media works of art plays an important role in the development of collection, archiving and preservation tools.

“Most new media art has a collective nature and is a set of actions that can be described as a 'mobile exploration' between different specialties such as art, computer programming, engineering and writing. With the dynamic and interactive nature of new media art and its potential to meet the audience beyond the physical boundaries of museums, it is not possible to refer to all collecting methods of object-centered collections. Therefore, trying to categorize new media and digital art practices and creating valid definitions can be helpful for the methodology of possible methods.” (Yücel, 2012, p. 57)

3. THEORIES, DEFINITIONS AND HISTORY OF NEW MEDIA ART

The explanations of Treske and Kutup regarding the features and principles of new media art in terms of the technologies it uses are as follows:

"The characteristics of Media Art are coding, transcription, combination, navigation, insertion, media creation, computability, and networking. Media art also includes themes of collaboration, identity, privatization and openness, tele-effect and surveillance." (Treske).

The following statement can be expressed for Internet Art, one of the sub-categories of new media art:

"In its simplest form, it can be shown as follows: It seems very impressive to us to talk about an art formation that can take place among any network structure that connects to each other. These works, products, installations can be viewed, edited and changed interactively from anywhere; it can also be kept alive forever." (Kutup, 2010).

Beryl Graham and Sarah Cook in the book *Rethinking Curating* (2010), the characteristics of the new media and the characteristics of new media art in the following expression of the similarity.

"Art that is made using electronic media technology and that displays any or all of the three behaviors of interactivity, connectivity, and computability in any combination." (Graham & Cook, 2010, p. 10.).

As Lev Manovich wrote in the introduction part of *The New Media Reader* (2003), he does not separate new media art from new media. According to Manovich, this consists of a single arena: a place where developers and artists come together and work and produce together. (Manovich, 2003, p. 15).

3.1. Theories And Definitions of New Media Art

New media art, due to its potential openness to new compositions is also often named with other categorical names such as “Digital art”, “Computer art”, “Internet Art”, “Cybernetic Art”, “Multimedia art” and “Interactive art”, which have sometimes similar characteristics and are also used interchangeably. Although these titles were gathered under an umbrella title as digital art and new media art over time, they continue to exist separately. Digital art coincides with the period in the seventies, when computers were first used experimentally to make art. Yet, new media art covers all media such as radio, satellite, software, fax, telephone, video, light, electricity, and web. Digital art narrows down towards more digital fields than new media art. Since the new media art also includes the old technology, it has not been determined chronologically either. “New Media Art recalls the mythological Phoenix: “everyone knows it exists, no-one knows where it is”. (Quaranta, 2013. p. 31).

“New media art is an umbrella term for artwork produced using new media. It includes a diverse set of categories such as digital art, computer graphics, computer animation, virtual art, Internet art, interactive art technologies, but may also pertain to such fields as computer robotics or art as biotechnology. New media art is characterized by spanning practices ranging from conceptual and virtual art to performances and installations. Very often, new media art

acts like a platform for communication and interaction rather than a closed work.” Retrieved from (https://en.wikiversity.org/wiki/New_Media_Art) (2021) link accessed 03 June 2021.

Beryl Graham and Sarah Cook in the book *Rethinking Curating* (2010), they define New Media Art as follows:

“New media art, in its broadest sense, “have amassed around [...] a varied nomenclature, including art & technology, art/sci, computer art, electronic art, digital art, digital media, intermedia, multimedia, tactical media, emerging media, upstart media, variable media, locative media, immersive art, interactive art, and ‘Things That You Plug In.’” (Hasdemir, 2013. p. 3).

According to Mark Tribe and Reena Jana, new media art utilizes media technologies and is interested in the cultural, political and aesthetic possibilities of these tools.

They find new media art to be a subset of two broader categories: Art and Technology and Media art.

“Art and Technology refers to practices, such as Electronic art, Robotic art, and Genomic art, that involve technologies which are new but not necessarily media-related. Media art includes Video art, Transmission art, and Experimental Film -- art forms that incorporate media technologies which by the 1990s were no longer new. New Media art is thus the intersection of these two domains.” (Tribe & Jena, 2006.)

Geert Lovink, gives the following definition in his book *Zero Comments* (2008):

“New media art can best be described as a transitional, hybrid art form, and a multi-disciplinary cloud of micro practices. Historically, new media arose when the boundaries between clearly separated art forms such as film, theater, and photography began to blur, due to the rise of digital technologies.”
(Lovink, 2008. p. 41).

Christiane Paul who is an Associate Professor in the School of Media Studies at The New School, and Adjunct Curator of New Media Arts at the Whitney Museum of American Art in New York City, in her book of *New Media in the White Cube and Beyond: Curatorial Models for Digital Art*, defines new media art as follows:

“Process oriented, time-based, dynamic, and real time; participatory, collaborative, and performative; modular, variable, generative, and customizable.” (Paul, 2008. p. 4).

These definitions can be thought more as the characteristics that determine the possibilities of new media art, instead of the conditions that determine its existence. In other words, the relationship between technology and art determines the possible technological developments used by the artists in their works. A current example to this can be the artist Refik Anadol, who creates what he calls data sculptures, and other digital works.

In a world where societies are shaped constantly by new information; the transformation of numbers that appear as abstract concepts into artistic works by undergoing a design transformation can become concrete with data sculptures... Two

or three-dimensional works that can be made using materials in the real world can be turned into new generation sculptures in the digital environment by processing the data determined by the artist. We witness the transformation of data into data art², thanks to the quality and categorization of the selected data, and the stories established through the preferred graphic patterns.

Refik Anadol, who processes data under different titles and transforms it into art, discussed the relationship of humans and their memories in the exhibition titled "Melting Memories" held in Istanbul Pilevneli Gallery in 2018. Focusing on the act of remembering, which is the key point of the memory, the artist focuses on the activity of the brain. In order to detect this mobility and put it into data, he made use of the technology in the Neuroscape Laboratory at the University of California, San Francisco, and discussed the relationship of people with their experiences during the act of remembering their memories. While drawing attention to the disappearance and dissolution of the memories that cannot be remembered, he also sought answers to what we can do with the memories that have passed.

² “Data Art or data-driven art is an artistic practice that relies on the usage of a dataset to convey emotions to the audience. Because it is based on data, the piece has a more objective truth behind its construction and does not solely come from the artist's imagination. In addition, to be considered as data art, the data used to create the piece should be somewhat understandable from the audience with proper explanations even if the meaning is not apparent at first glance. It contrasts with data visualization which seeks to be an effective representation of data into visual elements and generative art which relies on randomness, often found in nature, to elicit emotions.” (Kirell Benzi) Retrieved from <https://www.kirellbenzi.com/blog/data-art-definition>, Link accessed 29 June 2021.



Figure 1: Refik Anadol – Melting Memories Exhibition, 2018, Pilevneli Gallery,
Retrieved from <https://refikanadol.com/works/melting-memories/> Link accessed 27
June 2021.

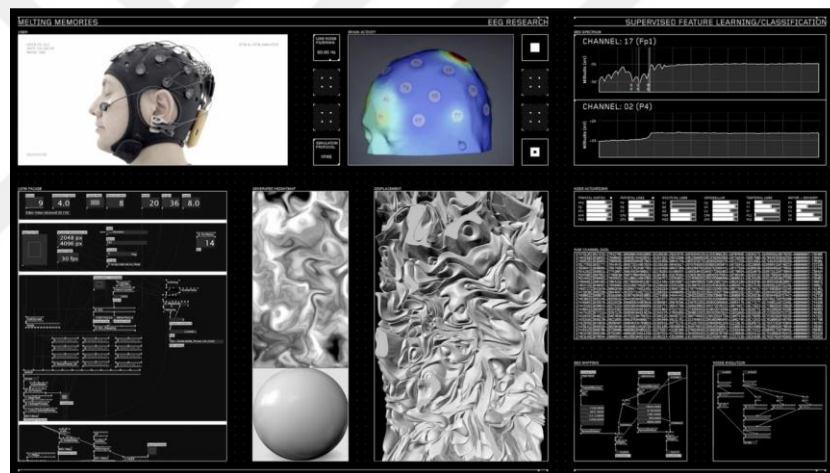


Figure 2: Refik Anadol – Melting Memories Exhibition, 2018, Pilevneli Gallery, Retrieved from
<https://refikanadol.com/works/melting-memories/> Link accessed 27 June 2021.

In 2021, Anadol aimed to create a different experience in each section of the space in his exhibition titled Machine Memories at Pilevneli Gallery, Istanbul. The lower floor of the exhibition is called the “archive room” and all the data used is clearly shown. Making use of all the unprocessed 3D artificial intelligence photographs taken by the Ise, Mro and Hubble telescopes, which are open to the

public, the artist designed these images as a data tunnel, creating an experience space in which architecture is also involved, as in most of his works.

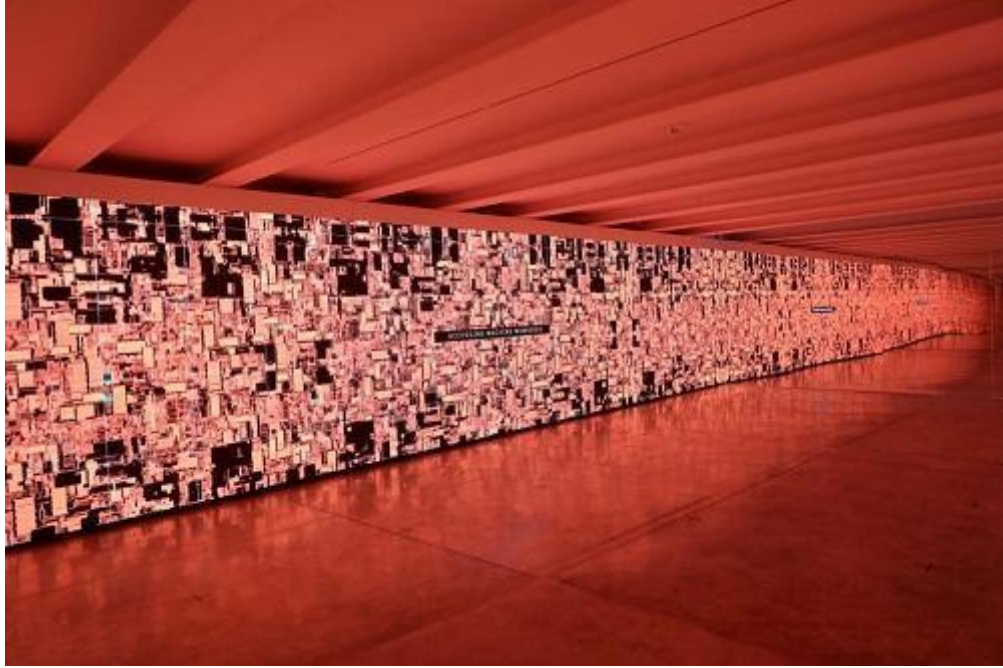


Figure 3: Refik Anadol, Machine Memories Exhibition, 2021, Retrieved from

<https://tersdergi.com/ucretsiz-gezilebilecek-makine-hatirlari-uzay/> Link accessed 25

June 2021.

Taking into account the architecture of the gallery, Refik Anadol has developed an artificial intelligence that can determine the duration of visiting the exhibition. He determines the images in 3-minute videos with the help of artificial intelligence by pulling them from the image pool. Thanks to the developed artificial intelligence, the duration in which visitors stay in different areas on average is calculated and the length of the videos to be shown is planned according to the result. It is aimed to create a separate calculation and therefore a separate experience for each space of the gallery. The artist, who aims to appeal to all age groups and all segments

in the public sphere, has opened every code used on artificial intelligence to the public.

Artist-academic Bager Akbay comments on this subject as follows:

“...data is also public. This is important. Normally a work of art is a protected area.

The exhibition itself is something else. The work is actually the integrity here, but the images are in a usable place. This is something very valuable.” (Canikligil, 2021, 3'.46" - 3'.56")

Bager Akbay's work Deniz Yılmaz (2015) should be cited as an example regarding the open presentation of codes. Deniz Yılmaz is a robot poet who incorporates Robotic art³ and Generative art⁴ techniques. It can write his own poems and create its own art discourse with the codes created to this effect. Akbay, who is not interested in the visual aesthetics that exists in general in robotic works of art, did not have a concern about beautifying the work. He said, “I will not interfere with the poems or the process by human aesthetics or human mind. By also saying “... there is no concern of making us like it, but there is a concern of it being like us.” (Graf, 2021, 39'.55" - 40'.10") Bager Akbay wanted to show us the normalization process of a robot as it is.

³ “Robotic art covers a group of practices that is usually related to the history of computer automated cultural artefacts (CACA) (Penny 2013), although some authors refer to the broader field of mechanically driven kinetic art in an attempt to frame it within an interdisciplinary field of media art practices (Hoetzlein 2009). It spans a range of processes and sensibilities, which Penny (2013) describes as the synthesised skills of the sculptor, installation artist and performer. From a general perspective, a collection of works that includes mechanical agents with a certain level of autonomy is often addressed as robotic art (Kac 1997, Penny 2013)” quoted from (Romic, 2018)

⁴ “Generative art refers to any art practice where the artist uses a system, such as a set of natural language rules, a computer program, a machine, or other procedural invention, which is set into motion with some degree of autonomy contributing to or resulting in a completed work of art.” (Galanter, 2003,p.4)

While genderless, its name has emerged from the average of many common Turkish names. The photograph, on the other hand, was created by averaging the photographs of the poets in the poetry column of Posta Newspaper, who sent their poems but were not published due to aesthetic concerns.

Connecting the CNC machine to the computer as a writing tool, Akbay wanted the resulting poem to be as if it were written by a human hand rather than being written as if it came out of a printer. At the same time, the work reached its current handwriting as a result of the research made without trying to reach the perfect handwriting. Bager Akbay explains this process as Deniz Yılmaz's effort to disenchant and normalize. (Graf, 2021, 36'.50'' - 37'.05'').



Figure 4: Bager Akbay, Deniz Yılmaz, 2015, Retrieved from

<https://www.facebook.com/1513077738975594/photos/pb.100063701434044.-2207520000../1519671888316179/?type=3> link accessed 25 June 2021

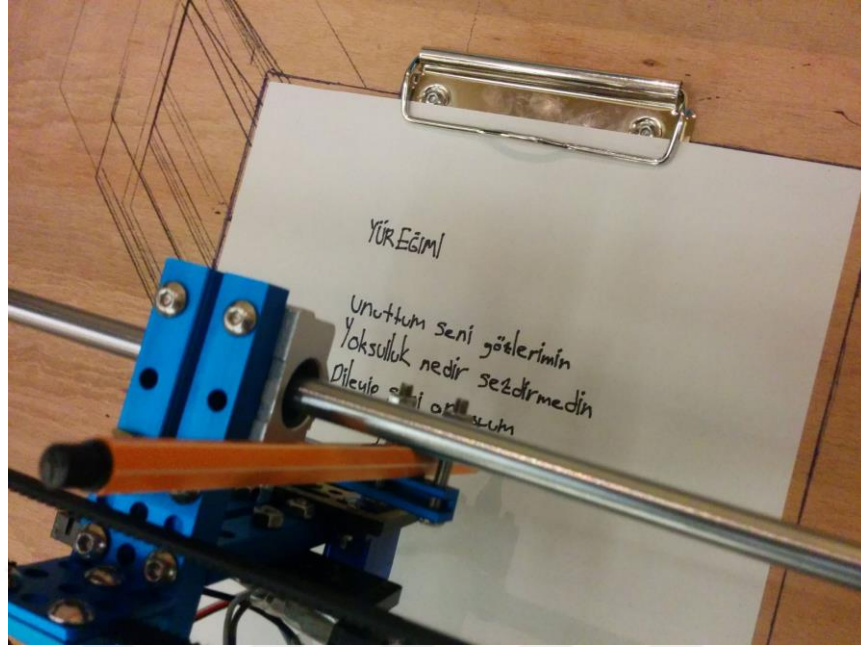


Figure 5: Bager Akbay, Deniz Yılmaz, 2015, Retrieved from <https://www.facebook.com/1513077738975594/photos/pb.100063701434044.-2207520000../1693003457649687/?type=3> link accessed 25 June 2021



Figure 6: Bager Akbay, Deniz Yılmaz, 2015, Certificates of 17 sold works being signed at Contemporary Art Fair. Retrieved from <https://www.facebook.com/photo/?fbid=1688526681430698&set=pb.100063701434044.-2207520000..> link accessed 25 June 2021

The artist has published a guide for people to produce their own Deniz Yılmaz clones in their own home in the *Laboro Ergo Sum* (Istanbul, 2016). Aiming to publish all the code under a free license and present it with a ready-made robot kit, Akbay wanted to experience a work in both a free and purchasable format. (Akbay, Retrieved from <https://bagerakbay.com/deniz-yilmaz/> link accessed 25 June 2021).

Suggesting that, other than Robotic art and Generative Art, an artwork that exists under the new media umbrella accommodates Dadaism, Surrealism, Conceptual art, Performance art and literary features as well. (Pod Kirmak, Graf, 2021, 45'00'' - 45'.24'') Marcus Graf makes a technical connection between new and old:

“You have created a work in the classical medium from an avant-garde and pioneering medium, with ink on paper. That's why this is a work that falls between digital and analogue, new media-old media.” (Graf, 2021, 34'.08" - 34'.21").

Devices such as video and computer games, security cameras, cordless phones, and the Global Positioning System (GPS) are technologies that play an important role in the new media art. However, the most important point here is that new media art redefines these technologies as an art medium.

In an interview, American artist Brody Condon emphasizes the importance of ideas rather than materials in new media art, saying: “Every time you describe these artists by material, you are hurting, and not helping them [...] It's about ideas, not material.” (Quaranta, 2013. p. 32).

New media art focuses on process, compared to object-oriented art. In other words, the process, and the idea itself are in the foreground instead of the object. For this reason, the work becomes open to new possibilities and the development of new dynamics throughout the whole process. In this context, it is possible to see the new media artwork not as a finished product, but as an ongoing process. Due to its process-oriented structure and with the developing new dynamics, the work becomes open to manipulation, while at the same time it has a structure that can be interactively changed and individually adapted.

3.2. History Of New Media Art

New media art relates to Dadaism, Fluxus and Conceptual Art in terms of bringing the idea to the forefront as opposed to objects. According to Christiane Paul, the relationship between Dadaism and new media art, which took us to the 1920s with the idea that the idea came to the fore, is exemplified as follows:

“Dadaist poetry aestheticized the construction of poems out of random variations of words and lines, using formal instructions to create an artifice that resulted from an interplay of randomness and control. This idea of rules being a process for creating art has a clear connection with the algorithms that form the basis of all software and every computer operation: a procedure of formal instructions that accomplish a ‘result’ in a finite number of steps. Just as with Dadaist poetry, the basis of any form of computer art is the instruction as a conceptual element.” (Paul, 2008. p. 18).

The idea being at the forefront, as well as the interaction of the audience with the work as participants are examples of the bond between new media art and

dadaism. Dadaist art sought to become one with life. In this way, everyone can be an artist, and since, according to the views of the movement, life is a big art scene, people can easily interact with the work as participants - as a necessity to maintain their daily lives. This brings with it the following: “Art as a vocation or skill that is learnable and requires repetitive actions will henceforth be replaced by the intentions of the artist.” (Erenus, 2012, p. 100) As an example, Marcel Duchamp and his famous Fountain can be given as an example. Fountain is a fabricated urinal sold in many places. Taking this ready-made object and sending it to the exhibition interrupts the definition of the work of art. The fact that a ready-made object can be a work of art is an indication that ideas come to the fore more than materials and craftsmanship in the work of art. This also makes it easier for viewers to interact with the same productions of the work.

The intersection between the art and technology has increased when the industrial age was replaced by the electronic age. The interest and curiosity of artists have increased towards practices that intersect art and technology. 'Experiments in Art and Technology (EAT)⁵, which Billy Klüver founded in 1966 with the idea that artists and engineers can work together in an interactive way, is the first example of art and technology cooperation where engineers, researchers, scientists and artists can work together. In his opening speech at the opening of the exhibition “Art and Engineering: The Legacy of Billy Klüver and E.A.T.” curated by Randall Packer, Billy Klüver stated the following:

⁵Experiments in Art and Technology (EAT) was a collective formed in 1967 in New York to promote collaboration between the arts and new technology. <https://www.tate.org.uk/art/art-terms/e/experiments-art-and-technology-eat> link accessed 25 Jan 2021.

"The new interface I will define is one in which the artist makes active use of the inventiveness and skills of an engineer to achieve his purpose. The artist could not complete his intentions without the help of an engineer. The artist incorporates the work of the engineer in the painting or the sculpture or the performance." (Klüver, 1966)

The exhibition consists of two parts: Virtual Pavilion and Artists, Engineers and Collaboration.

Virtual Pavilion - A multi-user virtual environment for Expo'70 in Osaka, Japan, featuring more than 75 artists and engineers, originally based on the legendary Pepsi-Cola Pavilion. The digitally recreated installation will create a network between participating organizations and online audiences on the Web.

Artists, Engineers and Collaboration- This is the section where installations by Klüver and accompanying artists and other EAT engineer-artist collaborations take place.

The artists who designed the pavilion wanted the exhibition to include participant experience and responsibility. The pavilion would not tell a story or guide the visitor through a didactic, authoritative experience. The visitor would be encouraged to explore the environment himself/herself and create his/her own experience.



Figure 7: Original Pepsi-Cola Pavilion. Retrieved from

<http://www.zakros.com/kluver/artengineer.html> link accessed 3 March 2021

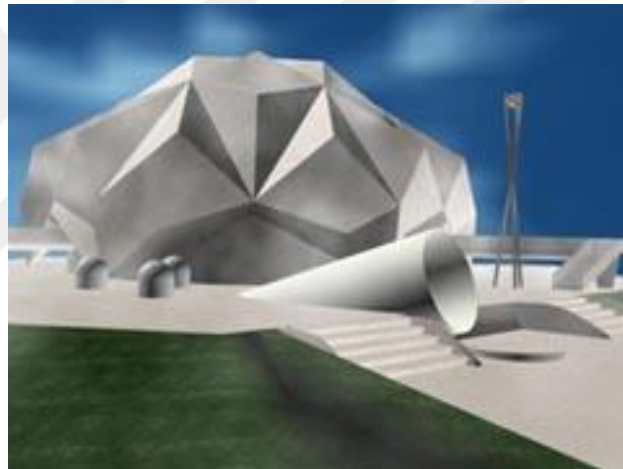


Figure 8: Digital rendering of the Pavilion. Retrieved from

<http://www.zakros.com/kluver/artengineer.html> link accessed 3 March 2021

Experiments involving art and technology are conducted to develop an effective collaboration between engineer and artist. Accordingly, EAT's reason for existence is the possibility of a work that will emerge as a result of the human interaction between the engineer and the artist.



Figure 9: Homage to New York - 1960 collaboration with Jean Tinguely. Retrieved from <http://www.zakros.com/kluver/artengineer.html> link accessed 3 March 2021



Figure 10: Oracle - 1962/65 collaboration with Robert Rauschenberg. Retrieved from <http://www.zakros.com/kluver/artengineer.html> link accessed 3 March 2021



Figure 11: Silver Clouds - 1966 collaboration with Andy Warhol. Retrieved from <http://www.zakros.com/kluver/artengineer.html> link accessed 3 March 2021



Figure 12: 9 Evenings - 1966 Robbie Robinson and John Cage. Retrieved from <http://www.zakros.com/kluver/artengineer.html> link accessed 3 March 2021

During the 1970s and 1980s, sculptors, architects, painters, video, photography, and performance artists increasingly began experimenting with and using computer technologies. Computer technology has gained an important place in the research processes of artists. This research and experimentation process in computer technologies has paved the way for the new media art to take shape.

4. INCREASING VISIBILITY OF NEW MEDIA ART WITH FESTIVALS AND ITS RELATIONSHIP WITH INSTITUTIONS

Computers have been used since the 1950s in both the visual and audio and text-based arts. Initiatives that started to explore the relationships between art, science and technology have shifted their focus towards digital technologies. When the art professionals (artists, art critics/ historians/ theorists) of the time dealt with these experimental approaches of the period, they caused an increase in the theoretical discourse about new media art and the formation of a network oriented to this field. In the 1960s, movements such as New Tendencies (1961–1973)⁶ and Experiments in Art and Technology (EAT, since 1967) can be cited as examples of these trends.



Figure 13: Experiments in Art and Technology (EAT) at the annual meeting of the

⁶ During the period 1961-1973, five international exhibitions were organized under the title **New Tendencies** in Zagreb, Croatia/Yugoslavia. They continued the development of ideas raised by Exat 51 during the 1950s, and formed part of the broader European post-informel art movement in the 1960s and 70s. https://monoskop.org/New_Tendencies link accessed 25 Jan 2021

Institute of Electrical and Electronics Engineers (IEEE), March 20–24, 1967, Coliseum and Hilton Hotel, New York. Artists Tom Gormley and Hans Haacke are talking to an engineer. Courtesy: Experiments in Art and Technology. Photography: Frank Grant. (Paul, 2016, p.71)

Towards the end of the 1960s, the theoretical discourses that developed with digitalization in art led to the emergence of new exhibition areas. After solo exhibitions in local and small galleries, the first international group exhibition held in Bruno, Czech Republic in 1968 paved the way for many events that would take place subsequently, giving place to only computer-generated works.

“That show, as well as a series of international group exhibitions on cybernetics and computer art that took place the following year, were organized by major art institutions and presented across Europe, the United States, and Japan, with some of them traveling around the world. This presence within the structures of cultural institutions fueled both the professional and mainstream imagination and created both an artistic trend and a certain hype surrounding imaginary futures that most radically presented itself at the world fairs of that time. There suddenly seemed to be a necessity for international networks for digital arts that would transgress the exhibition format and fulfill the need for networking on a regular rather than just occasional basis. Lacking their own networks, digital art practitioners originally participated in information technology ones and their annual conferences.” (Paul, 2016, p.71)

Since 1960, digital art has been presented at the International Federation for Information Processing (IFIP)⁷ and Association for Computing Machinery (ACM)⁸. The ACM has held an annual Computer Arts Festival since 1968. It has since been shown at the Special Interest Group on Graphics and Interactive Techniques (SIGGRAPH)⁹ since 1974. IFIP and ACM/SIGGRAPH organize competitions for information technologies, digital arts that focus on technical excellence rather than the development of artistic and critical discourse. Such practices were criticized for the lack of a background in the humanities, cultural and artistic backgrounds.

In the 1960s IFIP conferences provided space for much needed international networking of the digital arts community. An important meeting and networking point was the 1968 IFIP Congress in Edinburgh, where the art networks Computer Arts Society UK and Netherlands were both initiated and started their collaboration. (Paul, 2016, p.72)

⁷Formally IFIP is a non-governmental, non-profit umbrella organization of national societies working in the field of information processing. It was established in 1960 under the auspices of UNESCO as a result of the first World Computer Congress held in Paris in 1959. https://www.ifip.org/index.php?option=com_content&task=view&id=124&Itemid=439 link accessed 28 Jan 2021

⁸ACM, the Association for Computing Machinery, is the world's largest educational and scientific society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges which was established in 1947. ACM strengthens the profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. <https://www.acm.org/about-acm/acm-history> link accessed 28 Jan 2021

⁹ACM SIGGRAPH was founded in 1969 by Andy van Dam. It is a nonprofit international membership organization made up of thousands of people who share a passion for computer graphics and interactive techniques. ACM SIGGRAPH members are involved in a wide variety of fields, including computer graphics research, software development, digital art, scientific visualization, interactive technology, game design, visual effects, computer science, education, engineering, graphic design, film and television production, scientific research and more. The name ACM SIGGRAPH is an acronym that stands for: Association of Computing Machinery's Special Interest Group on Computer Graphics and Interactive Techniques. <https://www.siggraph.org/about/about-acm-siggraph> link accessed 28 Jan 2021.

Such initiatives that emerged and took place in the field of digital art are seen and evaluated as important movements for digital art and new media art to attract more attention and create cooperation.

Whereas new media art was once confined to art and technology festivals such as Ars Electronica and ISEA, since the beginning of the twenty-first century it has also started to appear regularly in exhibitions held in major art museums. Two of the most notable exhibitions in this respect are “0101010: Art in Technological Times” and “Bitstreams”, which took place in 2001 at SFMoMA and the Whitney Museum of American Art. It is important that these exhibits were held in an art museum; because it can be said that new media art is finally included in mainstream art. Nevertheless, although new media art and artists began to be discovered under the roof of a museum, they could not have more than a temporary appearance in museums. Among the reasons for this are the difficulties that museums face in determining a conservation policy for these works. In addition, progress is being made in the efforts of the Variable Media Network, which articulates and supports a range of preservation strategies, including storage, transfer, emulation and reinterpretation. The developments to be put forward in this regard are important in the transfer, preservation, and exhibition of classical works of art by future generations.

“As discussed in a conference on 'The Object in Transition' at the Getty Conservation Institute in 2008, there are times of crisis for various non-digital works in art museum collections. A workshop held at the Tate Modern in 2007 brought together a group of international, interdisciplinary professionals, with a particular focus on the challenges of decay and copying associated with sculptures of the last century. In the workshop, the deterioration of some Naum Gabo sculptures in the Tate Collection, especially

those containing cellulose materials, were chosen as an example for the subject. 3D modeling of sculptures is among the activities carried out to protect these works.” (Plate. 2010. p 2.)

It is possible to replace a work that is too fragile to be exhibited in such cases with a copy (digital or material) to represent it and predict that this will become increasingly acceptable to audiences of digital culture and traditional art, where images are infinitely malleable and reproducible. For this reason, the concepts of 'original' and 'authenticity' were reopened to question.

Museums act according to the definition accepted in the Museum Definition, Prospects and Potentials (MDPP) report at the International Council of Museums (ICOM)¹⁰ general assembly held in Vienna, Austria on 22 August 2007 (Yıldırım, 2019, p. 41):

“The museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, research, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment.”

(ICOM - MDPP, 2007)

¹⁰International Council of Museums (ICOM): It was established in 1946. ICOM is the global organization of museums and museum professionals, with 40.000 members from 140 countries from all continents. It is a non-profit and a non-governmental organization which is committed to the research, conservation, continuation and communication to society of the world's natural and cultural heritage, present and future, tangible and intangible. Since 1946, the ICOM definition played a central role for museums and museum professionals and became a reference in the international museum community (ICOM Statutes).

In the context of our thesis topic, art museums try to compile comprehensive resources that can best benefit their audiences. At a time when information is the museum's primary concern, art museums will also not want to limit their online content to physical objects in their collections. Instead, they want to use digital technologies to virtually fill the gaps in their collections. In such cases, they may face copyright issues while presenting online resources.

4.1. Festivals & Events

In addition to the technological activities initiated by engineers and artists in the late 1960s and the new media artists in the 1970s, the inadequacy of the technical equipment of the galleries and museums of the period and their unwillingness to invest in this issue, pushed them beyond these institutions to achieve greater accessibility and participation. They preferred to take part in festivals and events in terms of potential for cooperation and cooperation. Among these preferred festivals and events, SIGGRAPH (1969 -), Ars Electronica (1979 -), README (2002 - 2005) can be given as examples.

4.1.1. SIGGRAPH (1969 -)

The Special Interest Group on Graphics and Interactive Techniques (SIGGRAPH), founded in New York in 1969 by Andy Van Dam, is affiliated with the International Information Processing Machinery Association (ACM). ACM SIGGRAPH has held annual conferences on computer graphics since 1974, attended by tens of thousands of computer professionals. The first conference was held in

Boulder, Colorado in the summer of 1974, as the 1st Annual Conference on Computer Graphics and Interactive Techniques. The articles that emerged as a result of the conference attended by approximately 600 people were published in the journal of Pergammon Press. This and the next two conferences in Bowling Green, Ohio and Philadelphia did not get much attention; however, the conference held at the Hyatt hotel in San Jose in 1977 made a great impression and led to the continuation of this conference series. One of the reasons the conference held in San Jose was successful: It was the first SIGGRAPH to have official commercial shows. Many consider it the first SIGGRAPH.

After many successful conferences, the declarations made at those conferences have been published in the special issue of SIGGRAPH Conference Proceedings and ACM Transactions on Graphics since 2002. In 1981, art exhibitions began to be organized under the name Computer Culture Art.

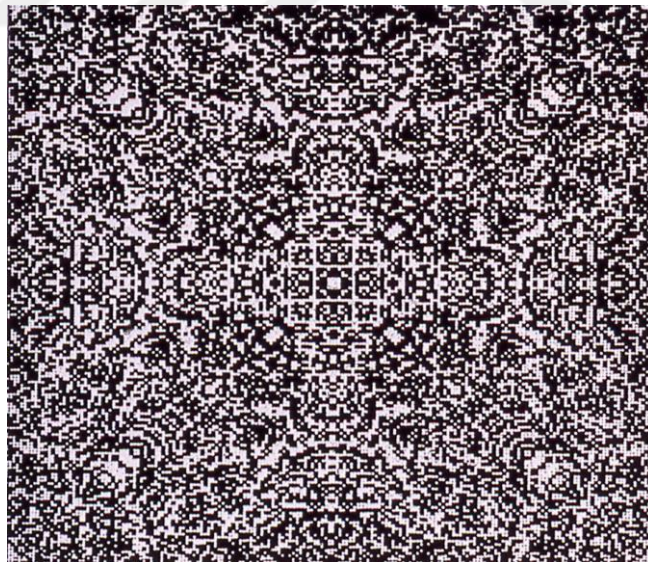


Figure 14: SIGGRAPH 1981: Computer Culture Art Show 81', Star Van Der Beek, Cosmos-1, 21x21 cm, 2D wall hang. Retrieved from

<https://digitalartarchive.siggraph.org/artwork/stan-van-der-beek-cosmos-1/> link

accessed 25 June 2021



Figure 15: SIGGRAPH 2020: Think Beyond Algotecton I, installed in the EX_CHANGE exhibition, College of Fine Arts, Carnegie Mellon University, May 2019. Computational Design Laboratory, Carnegie Mellon University, 2019. Daniel Cardoso Llach, Jingyang Liu, and Yi-Chin Lee. Retrieved from

<https://digitalartarchive.siggraph.org/artwork/daniel-cardoso-llach-jingyang-liu-yi-chin-lee-algotecton/> link accessed 25 June 2021.

By 1993, this situation developed interactive sculpture and robotic art research under the title of Machine Culture. Subsequently, SIGGRAPH awards programs were established to recognize work on computer graphics. Among them, the biennial lifetime achievement Steven Anson Coons Awards have been given for Outstanding Creative Contributions to Computer Graphics since 1983.

4.1.2. Ars Electronica (1979 -)

Ars Electronica festival, which was held for the first time on September 18, 1979 in Linz, Austria, was designed and organized to examine the emergence of the

Digital Revolution, its potentials and to address these researches in the context of art, society and technology. The founders of the festival, cyberneticist/physicist Herbert W. Franke, electronic musician Hubert Bognermayr, music producer Ulli A. Rützel and Hannes Leopoldseder laid the foundations of the success for Ars Electronica to survive until today.

In 1979, the festival hosted only 20 artist and scientist programs. Today, it includes more than 1,000 artists and scientists from more than 40 countries, as well as approximately 450 accredited journalists and bloggers. Within a few years it has become one of the most important media art festivals in the world. From year to year, its content has become wider and more versatile. There are symposiums, exhibitions, performances, concerts, and interventions that cover a wide range from speculative futuristic scenarios to analytical considerations, from provocative to philosophical discussions. To expand the boundaries of traditional lecture halls and artistic spaces and to sustain the staging of cultural events, the festival is organized under a new theme every year, and the organizers are constantly looking for new and interesting venues. The most important factors in ensuring the continuity of the festival were not limited to this, but the participation of famous artists, speakers, and media organization representatives from all over the world and the visitor network consisting of thousands of interested people in this meticulous organization.



Figure 16: Ars Electronica 2019, Internet of Everything: All Connections / Shaun Hu (CN) / photocredit: Shaun Hu / Printversion / Album Retrieved from

<https://ars.electronica.art/press/en/2019/11/19/human-unlimited/> link accessed 25 June

2021.

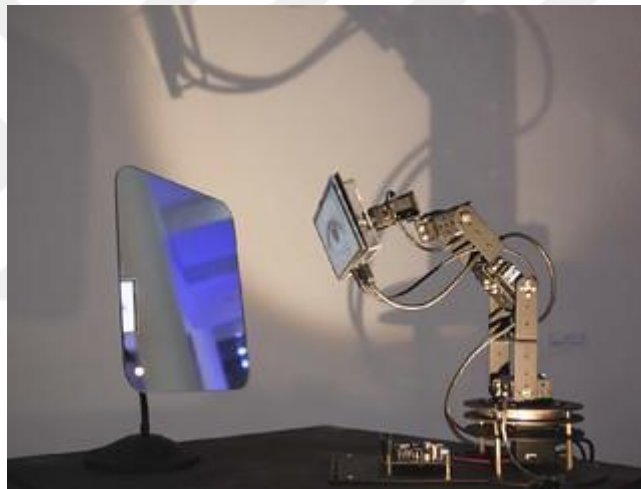


Figure 17: Ars Electronica 2019, Mechanically controlled eyes see the controlled eyes in the mirror looking back / QIU Yu (CN) / photo credit: QUI YU / [Printversion](#) / [Album](#) Retrieved from

<https://ars.electronica.art/press/en/2019/11/19/human-unlimited/> link accessed 25 June

2021

4.1.3. README (2002 - 2005)

The README festival, the first of which was held in Moscow in 2002, has been a traveling media art festival focusing on software art. It aimed to develop software art and to gain a critical context. It has been closely associated with

Runme.org, a rich source of software art. It has been organized four times, between 2002 and 2005.

A small but important festival for software art, README was held in Moscow (2002), Helsinki (2003), Aarhus (2004) and Dortmund (2005), respectively. Festival organizers Sergey Teterin, Alexei Shulgin, Olga Goriunova, Ekaterina Lazareva, Alex McLean and others have established a web portal called Runme.org, a comprehensive and rich resource for software art, which was launched during the event in 2003. Evolving as a conceptual "software art" map, Runme includes hundreds of subcategories. "RUNME is an evolving conceptual map of what I see as the larger meaning of the term "software art": the significant, diverse, and real creative activities at the intersections between culture, art, and software." (Manovich, 2003, p.1)

Of the three festivals mentioned above, Ars Electronica probably has much more important resources on new media art. In this context, the media festival or new media art created all over in the world takes the discussions of software art and culture to a new level. Whether it is consciously developed or not, software art is equated with algorithmically generated digital media: It consists of still and moving images and accompanying sounds. Starting from the Ars Electronica program's definition of "art created from code", it is "a generative art form derived and developed from computational processes." (The statement by the directors of Ars Electronica, festival program 2003, p. 2), (Manovich, 2003, p.2).

Ars Electronica acknowledged in the mid-1990s that the production of computer-generated images was no longer limited to a digital avant-garde movement, but that it also found a general response in culture and became the norm. A quick

review of the README repository also shows us that the general perception of that period developed in this way.



4.2. Institutions (Galleries and Initiatives)

One of the most important factors that will enable the new media art, which makes its voice heard more and more with festivals and other events, is its acceptance by art institutions. The main reason for this would be because exhibitions, festivals, publications, and symposiums play an important role in the wide acceptance of a movement gaining momentum in the cultural arena.

As we mentioned in the *4.1. Festivals & Events* section, SIGGRAPH (USA) conferences and Ars Electronica (Austria) festivals, which are responsible for the emergence of new media art, played a very active role in bringing new media artists together in the late 1970s. In the context of arts institutions, ZKM (Germany) in Europe in 1989, ISEA (Netherlands) in 1990 and NTT Inter Communication Center (ICC) in Tokyo are among the institutions that started to operate in this field. Walker Art Center in 1995, Whitney Museum of Art (New York) and San Francisco Museum of Modern Art in 2001 organized important exhibitions in the field of new media art and ensured that this movement took place under the roof of the museum.

4.2.1. ZKM (Germany, 1989 -)

Formerly named ZKM | Art and Media Technology Center, whose name was updated in 2016 as ZKM | The Arts and Media Center Karlsruhe was founded in 1989 as a public foundation by the city of Karlsruhe and the state of Baden-Württemberg. Since 1997, it is located in a former industrial munition factory under protection. Named Zentrum für Kunst und Medien in German, the center organizes special exhibitions and thematic events, conducts research and works on the effects of media,

digitization and globalization, and offers educational programs on public and personalized communication. The institution, which emerged with the idea of combining artistic concepts with future-oriented technologies, is sometimes called the "electronic or digital Bauhaus", as a phrase that goes back to its founding director Heinrich Klotz. The institution changed its mind in 2015-16 and stopped making a distinction between the Media Museum and the Contemporary Art Museum. Thus, they discovered that a large exhibition platform without division better reflects the zeitgeist of the time; because media and new media art in contemporary art have become a subject that is considered and researched as a standard and invalidates a spatial distinction.



Figure 18: ZKM | Center for Art and Media Karlsruhe. Photography: Uli

Deck. <https://zkm.de/en/the-zkm> link accessed 3 Feb 2021.

ZKM gathers under one roof of a total area of 15,000 m²; The Museum of Contemporary Art houses the Hertz Lab research platform, a library with event spaces for events and workshops, and a media library. Thus, it combines research and

production, exhibitions and events, archive, and collection under its own umbrella. In line with its mission, ZKM carries out studies in the axis of art, science and technology and evaluates studies in the field of new technologies in order to further develop them. Apart from the buildings it houses, it houses the University of Art and Design Karlsruhe (HfG) and the Städtische Galerie Karlsruhe [de] [Karlsruhe Municipal Art Gallery].

To meet the needs of the digital society, ZKM established the Hertz-Lab research platform in 2017. The agile structure of the platform encourages research and production in this field and continues the activities of Visual Media and Music & Acoustic Institutes in an expanded manner and scope. Under this scope, the platform has R & D studies, in order to have close intercultural exchanges with national and international institutes and research institutions operating in this field, to expand their former fields of activity and to explore the possibilities of expressing and shaping the media and art in parallel with the accelerating technological development, interdisciplinary at the intersection of media arts, science and society. In this direction, Hertz Lab's main activities are Artificial intelligence (AI)¹¹, virtual reality (VR)¹², augmented reality (AR)¹³ and AR applications, three-dimensional surrounding

¹¹“...definition of AI we will make three acceptable assumptions. First assumption is the thesis of Church [1], stating that every calculating device can be modelled by a program.Second assumption is that AI is a step device¹ and on every step it inputs from outside a portion of information (a letter from a finite alphabet Σ) and outputs a portion of information (a letter from a finite alphabet Ω). The third assumption is that AI is in some environment which gives it a portion of information on every step and which receives the output of AI. Also we assume that the environment will be influenced of the information which AI outputs. This environment can be natural or artificial and we will refer to it as “world”.” (Dobrev, 2004, p.2)

¹²“Virtual Reality is the use of computer technology to create the effect of an interactive three-dimensional world in which the objects have a sense of spatial presence.” (Bryson, 2013, p.4)

¹³“However, in order to avoid limiting AR to specific technologies, we propose to define AR as systems that have the following characteristics: 1) combines real and virtual; 2) interactive in real time; and 3) registered in 3-D. This definition aims to allow other technologies, such as mobile technology,

or sensor-based environments, and the artistic potential of electromagnetic fields are investigated in terms of their artistic applicability.

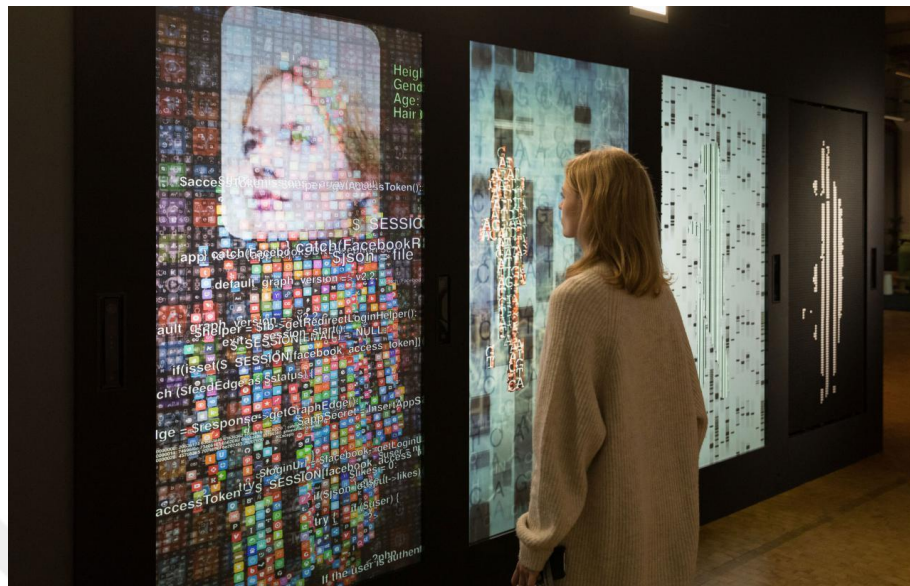


Figure 19: ZKM Hertz Lab Exhibition: Open Codes, Bernd Lintermann, YOU:R:CODE, 2017, Photography ZKM | Karlsruhe, photo: Jonas Zilius. Retrieved

from <https://zkm.de/en/publication/works-by-the-zkm-hertz-lab-for-the-exhibition-open-codes> link accessed 05 July 2021.

4.2.2. ISEA International (The Netherlands, 1990 -)

Inter-Society for the Electronic Arts, formerly known as ISEA International, was established in 1990 in the Netherlands. ISEA International is an international not-for-profit organization working with the arts, sciences and technology, promoting interdisciplinary academic discourse and exchange between culturally diverse institutions and individuals. ISEA International's main activity is; The International

besides HMDs while preserving the essential components of AR [6]. 2-D virtual overlays on top of live video can be done at interactive rates, but the overlays are not combined with the real world in 3-D [7]. However, this definition does allow monitor based interfaces, monocular systems, see-through HMDs or mobile devices.” (Mekni, 2014, p.206)

Symposium on Electronic Art (ISEA), which is an annual event since 2009¹⁴ and takes place in a different country each year, providing an international academic and cultural forum with a wide variety of annual exhibitions, presentations, demonstrations and public events. The symposium series was started in 1988 with the aim of meeting the institutions and individuals operating in the field of electronic arts in a common network and making it sustainable. It is important to accept different backgrounds, cultures, perspectives, practices, and experiences in order to encourage and support creative exchange between different groups and contribute to the progress of the region. It is equally important to ensure that creative and academic contributions of a high standard are maintained for each symposium and that they are archived and made available on an ongoing, permanent basis.

Although ISEA was founded in the Netherlands, it has had many different centers in different time periods: from 1990 to 1996 the organization was headquartered in the Netherlands, from 1996 to 2001 in Montréal, Canada; then a temporary headquarters again in the Netherlands; then in 2008 it had a new headquarters at the University of Brighton, UK. Inter-Society has existed as a membership organization for more than 15 years, and in 2009, it changed its corporate structure from an association to a foundation called "ISEA International" in order to provide better service.

¹⁴Organized as a biennial from 1988, when it first took place, to 2009, after which it was held every two years. The first symposium was held in Utrecht, Holland 1988 (FISEA), named First ISEA or FISEA'88. In the first four series of the symposium, the serial numbers were at the beginning, while in the following series they are named only as ISEA. <http://www.penplot.com/isea/isea.html> link accessed 6 Feb 2021.

ISEA's board of directors and membership are international. The organization is currently managed by the ISEA International Foundation Board, which has a supervisory role in each selected city to maintain the continuity of quality at the symposia.

4.2.3. NTT InterCommunication Center (ICC) (Japan, 1990 -)

NTT InterCommunication Center (ICC) is a cultural institution operated by NTT East Corp, which opened on April 19, 1997, inside the Tokyo Opera City Tower in Nishi Shinjuku, Tokyo. To celebrate the centennial of telephone service in Japan, development of the ICC's conceptual and practical framework began in 1990, about 8 years before the institution was founded. In this long preparation period, the institution organized many events related to art and science and started the publication of Intercommunication magazine.



Figure 20: NTT InterCommunication Center (ICC), Open Space, 2015, Photography KiokuKeizo. Retrieved from <https://www.ntticc.or.jp/en/about/> link accessed 05 July 2021.

Since its founding, ICC has been one of the pioneers in media arts studies, including virtual reality and interactive multimedia, with the aim of fostering the dialogue between science, technology, and artistic culture. In this direction, it has introduced developing technology, organized exhibitions that go beyond formats and categories, and initiated experimental trials and programs, including workshops, performances, symposia, and publications.

To transfer and record the data in the exhibitions and events organized by the ICC under its own roof to future generations, it has established terminals, which it pioneered and named HIVE. HIVE terminals have access to the ICC video art collection, interviews with various artists, and digitized video archives of wide-ranging events (exhibitions, symposia, artist talks, live events, workshops, etc.) organized by ICC since its opening in 1997. Additionally, some of the aforementioned video archives are also available on the web version of HIVE, which was released in June 2006.

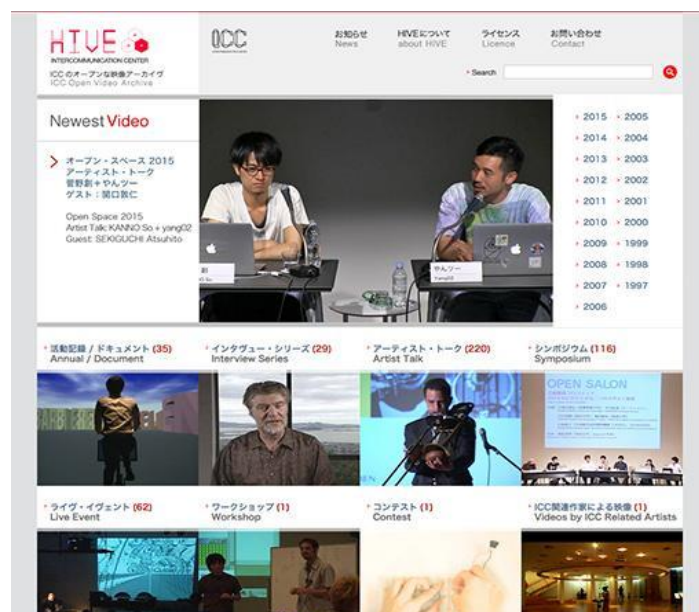


Figure 21: HIVE Website. Retrieved from <https://www.ntticc.or.jp/en/archive/hive/> link accessed 06 July 2021.

4.2.4. The Walker Art Center (USA, 1879 -)

The Walker Art Center, which dates back more than 125 years, started in 1879 when Thomas Barlow (T. B.) Walker from Minneapolis hung his favorite paintings on the walls in a room in his home and opened the door to anyone who wanted to come in. Over time, T. B. Walker expanded the space where he exhibited his paintings and in 1915 included 14 rooms, each with a different theme. On May 21, 1927, Walker Art Galleries were opened in the current location of the Walker Art Center.



Figure 22: The galleries in T. B. Walker's home, circa 1904. Retrieved from

https://walkerweb.imgix.net/cms/Inside_Walker_House.jpg?auto=format,compress&w=1920&h=1200&fit=max&dpr=1.5 link accessed 8 Feb 2021.

Today, the Walker Art Center is among the five most visited modern/contemporary art museums in the United States, attracting more than 700,000 visitors a year, along with the adjacent Minneapolis Sculpture Garden.

The Walker Arts Center takes a disciplined and diverse approach to the production, presentation, interpretation, collection, and preservation of art, with a focus on the visual, performance and media arts. In this direction, it focuses on the problems that create, identify and shape individuals, cultures, and communities. In this context, the programs of the Walker Art Center are organized in areas where disciplines such as media art and performing arts are constantly changing. The center deals with and operates on many platforms -gallery, theatre, garden, cinema, public spaces of its headquarters and campus- where it hosts the uncertainties and problems caused by interdisciplinary practices.

4.3. Museums

4.3.1. Whitney Museum of American Art (USA, 1930 -)

Sculptor Gertrude Vanderbilt Whitney became one of the leading patrons of American art in the early twentieth century, when in 1914 she established the Whitney Studio in Greenwich Village, seeing as American artists with fresh ideas had trouble displaying or selling their work. This building, which evolved into the Whitney Museum of American Art in 1930, opened its doors to the public in 1931.

The Whitney Museum of American Art has been a pioneer in expanding its exhibits and programs beyond its walls, opening museum branches in and around New York City. In these branches, they operated as independent spaces with their own staff, serving as training grounds for curators such as Thelma Golden, Shamim Momin, Lisa Phillips and Debra Singer. This gave the public greater access to Whitney's collection, while also catering to the needs of experimental artists by providing ample spaces and performance opportunities. As the premier institution dedicated to the art of the United States, the Whitney Museum of American Art presents the full spectrum of twentieth-century and contemporary American art, with a particular focus on works by living artists. However, the last of the museum's branches was closed in 2008.

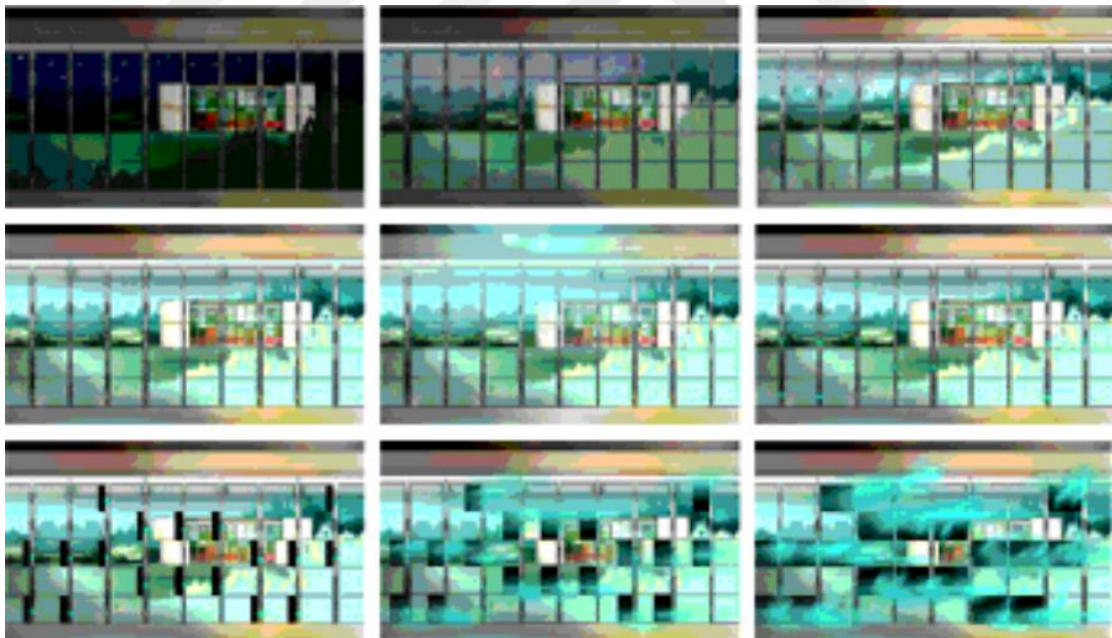


Figure 23: Jeremy Blake, Station to Station. Digital animation (work in progress) in BitStream exhibition. Courtesy of Feigen Contemporary. Retrieved from

<https://whitney.org/exhibitions/bitstreamslink> accessed 11 Feb 2021.

Since the invention of photography, nothing has had a greater impact on artistic production than the advent of digital technologies. In this context, the BitStream exhibition held at the Whitney Museum of American Art on March 22, 2001 has an important place; because this exhibition is the first to focus on American Digital Art. BitStreams is a provocative and stimulating presentation of contemporary art that uses digital media to reach new dimensions of artistic expression through the transformation of images, space, data and sound. The exhibition also has closer links with the joint use of digital software of photography, film, video, installation, sculpture and sound productions. Performance on 42nd in conjunction with BitStreams presented Pulse, a series of four events featuring live performances interwoven with digital media.

4.3.2. San Francisco Museum Of Modern Art (USA, 1935 -)

The San Francisco Museum of Modern Art (SFMOMA) was founded in 1935 under the directorship of Grace Morley as the "San Francisco Museum of Art", with the word "modern" added to the name of the museum in 1975. It is the first museum on 20th century art on the west coast of the USA.

The museum's first major and comprehensive exhibition for digital art, "010101: Art in Digital Times", mapped new developments in contemporary art, architecture, and design in 2001 as it evolved and was influenced by the increasing presence of digital media and technology. The exhibition sponsored by Intel was held between March 3 and July 8, 2001, and one floor of the museum housed the works of 35 artists, architects and designers. The title of the exhibition "010101" refers to the digital codes of 1s and 0s in addition to the date the exhibition was made available

online (1 January 2001) on the museum's website. It is one of the first and most comprehensive digital art exhibitions: a show full of animated "paintings", virtual reality art, cyborg sculptures, and other technological productions not always associated with aesthetics and beauty.

Museum curators stated that the exhibition "0101010: Art in Digital Times" is not just an exhibition of new technology, but rather an exhibition of how technology and its increasing use everywhere affect the art making process and productions. SFMOMA curator Benjamin Weil stated that with 010101: Art in Digital Times, BitStreams exhibitions are important because museums examine the cultural changes created by technology. Considering the year the exhibitions took place (2001), did this mean that new media or digital art had become widespread? Educator and artist Randall Packer, who created the online history of multimedia art for Intel, answered that question by saying "not yet".

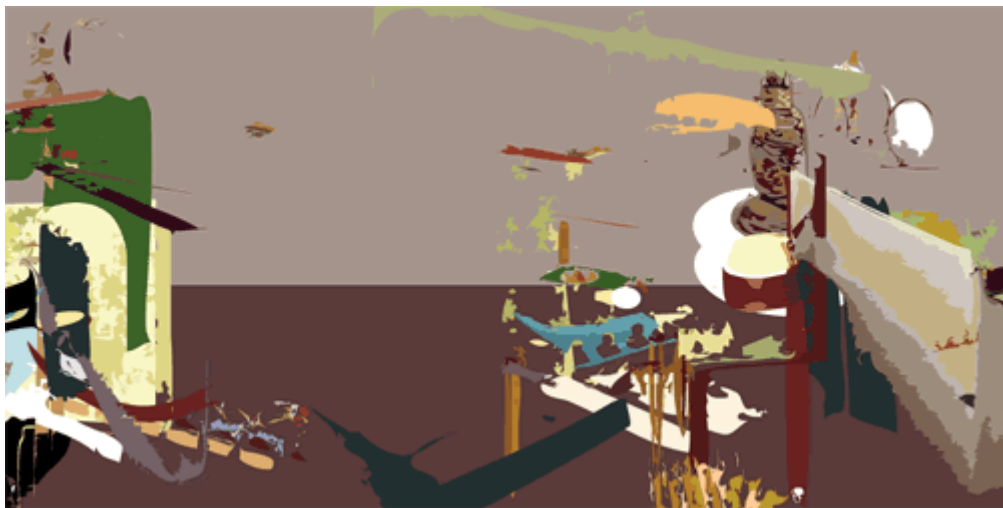


Figure 24: Chris Finley, Goo Goo Pow Wow (2000-2001) shown by SFMOMA at 010101: Art in Digital Times. Retrieved from

<https://digitalartsource.wordpress.com/2011/11/12/010101-art-in-technological-times/> link accessed 27.02.2021

Artists do not expect museums to catch up with them in dealing with cultural orientations. However, these two exhibitions can be considered as touchstones of the rise of digital art in terms of wider institutional recognition. It is important that large and respected museums finally look at and take seriously the cultural changes brought about by technology. This, however, does not mean that digital art became mainstream in 2001 (SFMOMA and The Whitney are both progressive contemporary art museums); but it means that digital artists, curators and enthusiasts are included in the mainstream in the sense that they can learn and develop their perspectives.

4.3.3 New Museology

Institutional inquiries developed by avant-garde and later art movements against traditional art institutions and museums have also led to an increasing awareness of art museums. In addition, studies in the field of museology have encouraged museums to question their own roles in social, political and cultural fields. In this context, the concept of post-modernism, which is one of the phenomena that triggers the transformation, should also be mentioned.

“The concept of post-modernism, which is effective in all economic, political and social fields, has also led to changes in the field of culture and art, and these changes have inevitably manifested themselves in museum policies. Post-modern museum policies have radically changed the situation of museums by removing the traditional structure of museums, which have been criticized for a very long time as exclusionary and elitist. ... A more audience-oriented and service-oriented approach has settled in museums, and

it has become a necessity for museums to develop new strategies to ensure the interest and continuity of visitors in order to survive.” (Yücel, 2012, p. 18)

The globalization experienced since the 1980s has also had an impact on this emerging situation, and numerous visitors reflecting the diversity of the society have also caused a guiding effect on the policies to be developed.

“Although it is claimed that museums have been influenced by business culture in the process of change accelerated in the 1980s, and the art that the museum includes has lost its autonomy and has become popular, on the other hand, a critical accumulation is formed in the field of art and museology. This accumulation, which can be called “new museology” in the larger field of museology, is a living understanding of the field that recognizes, analyzes, examines, exhibits and tries to transform the difficulties arising from its structure. Schubert (2004, 57) best summarizes the critical approach to become an integral part of museums today. The author states that museums have lost some of their past authority and infallible image, but at the same time they have become more transparent, more reliable and more democratic institutions. The new understanding of museology has “placed the museum at the center of the culture industry discourse” by developing different audiences, educational diversity and new exhibition models.” (Yücel, 2012, p. 24)

4.3.4 Collection

The inclusion of digital artworks in museum collections has also disrupted the understanding of creating collections by selecting the single, unique and specific objects that are embedded in the traditional understanding of museology. Since digital art practices can easily be copied rather than the traditional sense of museology, it has become more important to be "accessible" rather than "uniqueness" for artists who produce digital art. In this direction:

“... The first problem that emerges in the evaluation of digital art practices by museological systems is the physical existence of art production. The existence of a work of art as “material/material” or “immaterial/non-material” and sometimes even as a mixture of both is seen as the main subject of discussion. Because, ultimately, the gallery or museum space is an inevitable necessity for physical existence and it becomes difficult to control the space for practical applications such as immaterial artwork, curation, documentation, and corlima. ...In recent years, most art museums, galleries and contemporary art centers have gained awareness of digital art and have added artworks of the new medium to their collections. Today, new media art has been integrated into the contemporary art canon, and museums are reconsidering their basic museological functions such as collection, preservation, archiving, and exhibition with the demands brought by digital art.” (Yücel ,2012, p. 58-59)

As much as digital technologies change the process of creativity and preservation, they also affect the way visual arts are accessed and received by audiences. The

spread of the Internet and the increase in the content accessed have also changed people's expectations. Today, it is possible to find many copies of canonical works of art of different qualities on the Internet. Many art museums also digitize their collections and offer free access to photographic reproductions on their websites. Broadband technologies, 3D and VR studies range from virtual simulations of room-sized installations to efforts to reveal the fine, textured surface of paintings as demonstrated in specialized viewing processes in major museums.

The impact of these efforts seems remarkable: Visitors can now watch the video art in its entirety, at the time and place that suits them best. For example, all the films featured in Pierre Huyghe's Celebration Park exhibition at Tate Modern in 2006 were presented to the audience on the Tate website during the exhibition. This gives time-constrained visitors the opportunity to watch the films in full at a later convenient time, and for those who cannot visit the offline exhibition, an opportunity to experience a work of art in an alternative context.

Efforts to digitize museum's collections are increasingly moving beyond the confines of fine art collections to art museum libraries and archives. Visitors can now browse the various works in Tate's Archive Online without the compulsions of physical visits. As an example, thanks to the Getty Research Library's ongoing collaboration with the Internet Archive, they can access thousands of digitized works without recourse to special reader privileges. Visitors can spend as much time as they want in this wealth of material, and academic researchers can review the content for as long as they need.

The impact of digital technologies on art museums is both complex and profound. Everything from the production of art to its circulation and reception is now handled by digital technologies. This transformation necessitates a re-evaluation of the structure and logic of art museums. A number of new opportunities may arise that will result in a radically changed idea of what art museums and such institutions are and what they do. To evaluate this process and its possible effects on art museums as much as possible, it is necessary to consider the entire art museum ecosystem.

Fine arts and the creative transfer that develops in this direction are at the center of the system, and the practice of producing art takes place in the digital age and environment. Indeed, digital technologies influence every step of the creative process. Artists who work with more traditional media such as painting or sculpture now regularly use digital technologies to explore their subjects. Artists, who emphasize the uniqueness of their works, now frequently use both electronic software and hardware in the physical production of their works.

4.3.5 Copyrights

Considering the production and distribution characteristics of digital artworks, the fact that they can be easily copied is an important point to be mentioned in terms of copyright and intellectual property in this field. Apart from the participation of digital works of art to museums, galleries or private collections through purchase, loan or donation to art institutions, the issue of the "artist fee" for the work to be exhibited is one of the cases that has not yet been cleared. This situation can be

resolved through contracts that can be drawn up for this purpose; however, taking into consideration the intricacies of the royalty fee, the screening or participation fee and the lack of a certain standard for these issues, a base price can be determined by acting jointly with the participation of the actors in the art world. For example:

“CARCC (Canadian Artists Representation Copyright Collective) and CARFAC (Canadian Artists Representation), which were established in London and have been publishing rights and fee schedules for the legal and economic rights of visual media artists and the use of copyright since 1968, have an important function for artists. Developed by Jack Chambers and Tony Urquhart, both artists, the association offers resources and support to artists on issues such as minimum wage schedule, royalties schedule, intellectual property rights, ethical rights.” (Yücel, 2012, p. 79).

Another problematic area regarding copyrights is the issue of copying and using the images shared by museums for their digital collections on their websites for free. Fortunately, since the solution of these images is important in their print quality, this issue has not been a big problem over time. But here the difficulties of integrating the artist's work with the logic and structure of the museum are revealed.

Tate Modern, with limited funds and a relatively non-profit status, can take a relatively risk-friendly approach when we consider the above-mentioned issues as risks to the fair use of digital content on its sites. Even though the institution will make the necessary assurance attempts regarding the content, complaints may be received regarding the presentation of the content. In such cases, usually an apology is

prepared by the institution and the content is removed from the museum's site. While this move is relatively easy for nonprofits, it can be more challenging for institutions like the Getty Museum or the Guggenheim Museum. Compensation lawsuits and negotiations brought in line with the violation of rights bring a much more careful and laborious process. In order to prevent such a problem, while the usage rights of digital works are regularly monitored by museums, possible violations and losses of rights for both parties are tried to be prevented. Artists experience violations of rights mostly due to the usage or display times of digital content.

Processes such as copyright actions still need to be fine-tuned. That is, digital technologies should make it easier to expand, map and share the information matrix that surround the museum contents. Initiatives such as Creative Commons 2.5¹⁵ are one of the promising steps in this direction. If we look at Turkey, such an initiative has not yet emerged.

“In terms of intellectual property and copyright, it can be said that the methods followed by many art institutions are in parallel with each other. In general, intellectual property and copyright procedures created by specialized staff in museums cover all visual and audio elements such as images, films, music, and texts which are mainly used in printed and remote access media. In particular, prohibitions regarding the use of any content that has a decisive feature regarding the accesses made over the internet and the materials accessed through the museum website should be specified”. (Yücel, 2012, p. 80).

¹⁵Creative Commons maintains and publishes policies that apply to the use of our websites, content and software that we publish, our trademarks, and to those participating in the Creative Commons Global Network, including Individual and Institutional Members, as well as non-Members who participate in CC projects around the world. <https://creativecommons.org/policies/> link accessed 27 March 2021

NFT (Non-Fungible Tokens), an important development in the field of digital art, increases the visibility of new media art. While it offers new creative possibilities for artists, it also creates new factors in terms of collecting and copyrights. Founded in the mid-2010s, it gained momentum in 2017 with a digital game called CryptoKitties. It then increased its visibility in 2018, with the release of ERC-721, a digital standard on the Ethereum blockchain. As one of the major auction houses, Christie's describes NFT as follows:

“An NFT, or ‘non-fungible token’, is a unique, digital certificate that is stored on a blockchain and provides certain ownership rights in an asset, typically a digital one, such as a digital work of art. NFTs provide a powerful tool to establish and demonstrate ownership rights in the digital asset space where it is often hard to demonstrate such rights given how quickly and easily digital works can be replicated. NFTs are described as ‘non-fungible’ because each one is unique and of different value. This is in contrast to ‘fungible’ assets such as dollars or Bitcoin, which are identical and interchangeable.

An NFT is generated (or ‘minted’) using a ‘smart contract’, which is computer code stored on a blockchain. The NFT includes a few different fields such as the NFT’s unique identifier (typically referred to as a ‘TokenID’); the blockchain wallet address of the current owner; and an identifier of where the digital work of art associated with the NFT may be found. Since blockchain transactions are fully transparent, anyone can view an NFT and its underlying information, including the blockchain address of the current owner and the blockchain address of each owner since the creation, or ‘minting’ of the NFT.”

Retrieved from <https://www.christies.com/features/NFT-101-Collection-Guide-to-NFT-11654-7.aspx> link accessed 06 July 2021.

Sales are increasingly taking place on NFT platforms. One of the most important and sensational of these sales happened at the Christie's auction house. It is important as it is the first auction house to accept cryptocurrency and initiate the sale of digital works of art. 'Beeple's EVERYDAYS - THE FIRST 5000 DAYS' by digital artist Mike Winkelmann was offered for sale in a single lot and was sold for \$69,346,250.

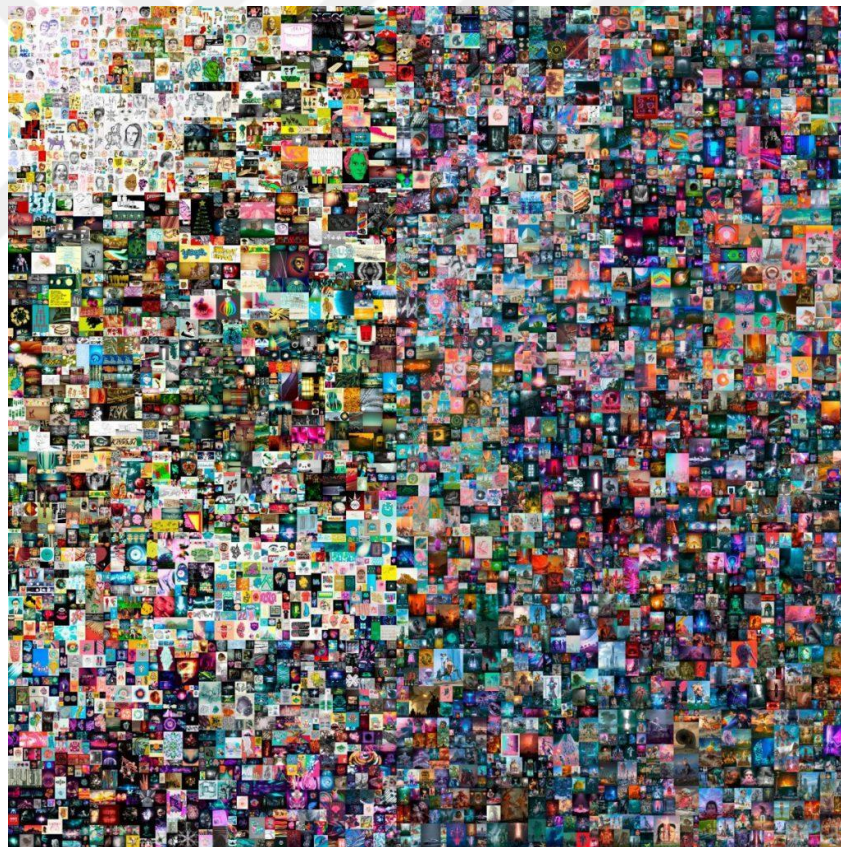


Figure 25: Beeple, Everydays: The First 5000 Days, non-fungible token (jpg) 21,069 x 21,069 pixels (319,168,313 bytes) Minted on 16 February 2021. Retrieved from

https://www.artdogistanbul.com/en/tumu/guncel_sanat/christies-ilk-kez-tamamen-dijital-bir-eser-satacak.htm link accessed 25 June 2021.

Today, with the emergence of NFT (Non-Fungible Tokens), the usual buying and owning phenomena are partially differentiated, and the rights of the collectors and the artist have begun to change. Since there is no certain information about where the change will lead, different possibilities need to be considered.

“The mechanism for NFT creation relies on uploading a file onto an NFT auction market, where the file is recorded on the digital ledger as an NFT and can thus be purchased or sold using digital currencies. While the creation of an NFT that represents a piece of art can be exclusive to an artist, they can nevertheless retain the copyright to the work and therefore reproduce more NFTs underpinned by the same piece of art. For this reason, a person who purchases an NFT does not gain necessarily possession of the original digital file, and therefore does not have exclusive access to the file.” (Chohan,p. 3)

This development, which can bring different discourses on the uniqueness of art, encourages us to rethink about copyrights and collecting. The views of artist - academician Bager Akbay and ‘city illustrator’ Tarık Tolunay are important in this regard.

According to Bager Akbay, “Scarcity is something that does not exist in digital. Because if I have a file, when I copy-paste, there are 2 of that file and after a while it is very difficult to argue: Which one was the original? And it doesn't even matter.” (Deutsche Welle, 0'33" - 0'42")

Tarik Tolunay, “In our usual internet browsing, such images are things that we can access for free. Digital works can be copied millions of times, but if only one of them is encrypted and registered with Crypto technology, it will stand out from the others. So, it is no different than buying Picasso's Guernica”.
(Deutsche Welle, 0'.43"- 01'.10")

A digital work of art may have more than one collector within the scope of the auction held at NFT. It is not only the certificate of the artwork that is sold; it also includes the sale contract of the work. This contract can ensure that the artist maintains his connection with the future of his work.

“The primary interest in NFTs emerges from uses that involve creating scarcity to ascribe value to code-built digital objects. An NFT can, for example, imprint a blockchain with a unique signature for the ownership of a digital asset. For creative works, including images and other objects that one would “autograph” in the physical world (i.e.collectibles), there is an evident use for ascribing unique ownership on metadata through a cryptographic hash function. In other words, the distributed ledger technology helps to authenticate ownership of a digital asset that in the physical world would accrue to a single owner of a valuable real, material object. In December 2020 the sale of NFTs were estimated at \$12 million, but exploded to something along the lines of \$340 million two months later in February, 2021. Naturally, one is predisposed to thinking of major pieces of art as exclusive objects for which buyers pay extraordinary premiums to hold on to them for their

uniqueness. A similar avenue of ascribed value has emerged for digital art. “

(Chohan, p. 4)

Unlike the works purchased with the traditional method, in case the works of the artists sold on the NFT platform are resold, they can continue to earn on the contract they determine. The reason why it is different is that every NFT work can be traced and that it is a system that requires a contract. In the traditional method, this situation is at the initiative of the selling institution.

According to Akbay, “....NFT is a contract. So, you don't just buy the certificate, you get a contract of the certificate as well.” (Deutsche Welle, 4'.30" - 4'.35") ...I am selling an artwork and in the artwork's contract I say: You will give me 10% of every subsequent sale...This gives a very strong hand to the artist." (Deutsche Welle, 6'.43" - 6'.54")

5. CONCLUSION

The subject covered in this thesis is the transition of new media art from festivals to museums, the examination of the participation processes from temporary exhibition models to museum exhibitions and entry into their collections. The limitations of the study would be the development of new media art in Turkey within the scope of the transition processes mentioned above. In the context of this development, the study has been prepared to support issues such as the scope and content of future research.

Changes in the media used in art production have brought about changes in the production, transfer and consumption of art. This situation has also revealed a change in the presentation, management and preservation of works inside art institutions. There has been a great change in the communication of the audience with the works of art, and it has brought a change that imposes duties and responsibilities on the viewer. By presenting the simulation of traditional artworks, new media art has brought a new dimension to their relationship with the audience as well.

Although the new media art started to make its name known to large masses with festivals and events such as symposiums, congresses, competitions, etc., it was included in the mainstream art environments much later. The inclusion of the works of new media artists in museum or long-term collections is dated after its acceptance as an art movement. This is due to the fact that it took time for new media art to be accepted as an art discipline by art authorities, critics, collectors and art directors.

In conclusion, one of the main aims of this study is to comprehend the place of new media art both in Turkey and in the world. New media art is discussed in the context of production techniques, form, content and essence. In this context, the courses of new media art such as its entry and exhibition in channels such as galleries, museums and art collections have been the subject of the problematics and research discussed in this study. Being thought of as a contribution to the existing literature, this thesis can be an additional source for later academic studies.



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