

LEONARDO®



SUALS

Goldsmiths



LEONARDO ELECTRONIC ALMANAC

VOL 19 NO 3 VOLUME EDITORS LANFRANCO ACETI, STEVE GIBSON & STEFAN MÜLLER ARISONA EDITOR ÖZDEN ŞAHİN

Live visuals have become a pervasive component of our contemporary lives; either as visible interfaces that re-connect citizens and buildings overlaying new contextual meaning or as invisible ubiquitous narratives that are discovered through interactive actions and mediating screens. The contemporary re-design of the environment we live in is in terms of visuals and visualizations, software interfaces and new modes of engagement and consumption. This LEA volume presents a series of seminal papers in the field, offering the reader a new perspective on the future role of Live Visuals.

## NYUSteinhardt







#### LEA is a publication of Leonardo/ISAST.

Copyright 2013 ISAST Leonardo Electronic Almanac Volume 19 Issue 3 July 15, 2013 ISSN 1071-4391 ISBN 978-1-906897-22-2 The ISBN is provided by Goldsmiths, University of London.

#### LEA PUBLISHING & SUBSCRIPTION INFORMATION

## Editor in Chief

Lanfranco Aceti lanfranco.aceti@leoalmanac.org

#### Co-Editor

Özden Şahin ozden.sahin@leoalmanac.org

#### Managing Editor

John Francescutti john.francescutti@leoalmanac.org

#### Art Director

Deniz Cem Önduygu deniz.onduygu@leoalmanac.org

#### Editorial Board

Peter J. Bentley, Ezequiel Di Paolo, Ernest Edmonds, Felice Frankel, Gabriella Giannachi, Gary Hall, Craig Harris, Sibel Irzık, Marina Jirotka, Beau Lotto, Roger Malina, Terrence Masson, Jon McCormack, Mark Nash, Sally Jane Norman, Christiane Paul, Simon Penny, Jane Prophet, Jeffrey Shaw, William Uricchio

#### Cover Image

*The Encounter*, Elif Ayiter, 2010, Screenshot of Cinematic Play Session in Second Life. © Elif Ayiter. Used with Permission.

### Editorial Address

Leonardo Electronic Almanac Sabanci University, Orhanli – Tuzla, 34956 Istanbul, Turkey

#### Email

info@leoalmanac.org

#### Web

- » www.leoalmanac.org
- » www.twitter.com/LEA\_twitts
- » www.facebook.com/pages/Leonardo-Electronic-Almanac/209156896252

### Copyright © 2013 Leonardo, the International S

Leonardo, the International Society for the Arts, Sciences and Technology

Leonardo Electronic Almanac is published by: Leonardo/ISAST 211 Sutter Street, suite 501 San Francisco, CA 94108

#### USA

Leonardo Electronic Almanac (LEA) is a project of Leonardo/ The International Society for the Arts, Sciences and Technology. For more information about Leonardo/ISAST's publications and programs, see http://www.leonardo.info or contact isast@leonardo.info.

Leonardo Electronic Almanac is produced by Passero Productions.

Reposting of this journal is prohibited without permission of Leonardo/ISAST, except for the posting of news and events listings which have been independently received.

The individual articles included in the issue are © 2013 ISAST.

## LEONARDO ELECTRONIC ALMANAC, VOLUME 19 ISSUE 3

## **Live Visuals**

## VOLUME EDITORS LANFRANCO ACETI, STEVE GIBSON & STEFAN MÜLLER ARISONA

EDITOR **ÖZDEN ŞAHİN**  The Leonardo Electronic Almanac acknowledges the kind support for this issue of

## . Sabancı . Üniversitesi



Goldsmiths UNIVERSITY OF LONDON



## NYUSteinhardt Steinhardt School of Culture, Education, and Human Development

NYUSteinhardt

Steinhardt School of Culture, Education, and Human Development



MUSIC AND PERFORMING ARTS PROFESSIONS

Ron Sadoff, Director

**Music Composition** 

## Music Technology

B.M., M.M., Ph.D. Including a new 3-Summer M.M. B.M., M.M., Ph.D. Concert Music, Jazz, Film Scoring, Electro-Acoustic, Songwriting

Immersive Audio, Computer Music, Informatics, Cognition, Recording and Production

• Study with a premier faculty who are active in the local and international music field, including Juan Pablo Bello, Morwaread Farbood, Phil E. Galdston, Paul Geluso, Tae Hong Park, Kenneth Peacock, Agnieszka Roginska, Robert Rowe, S. Alex Ruthmann, Ronald Sadoff, David Schroeder, Mark Suozzo, and Julia Wolfe

- Work within a large and enriching university environment in the heart of New York City
- Have access to state-of-the-art facilities including the James L. Dolan Music Recording Studio, one of the most technologically advanced audio teaching facilities in the United States
- **Collaborate** with an outstanding variety of department performance groups, along with choreographers, visual artists, writers, filmmakers, and scholars in other fields
- Take advantage of **special courses** offered abroad and during the summer

Visit www.steinhardt.nyu.edu/music or call 212 998 5424 to learn more.

### NEW YORK UNIVERSITY

## Leonardo Electronic Almanac

## Volume 19 Issue 3

8 EDITORIAL Lanfranco Aceti

12 REVISITING CINEMA: EXPLORING THE EXHIBITIVE MERITS OF CINEMA FROM NICKELODEON THEATRE TO IMMERSIVE ARENAS OF TOMORROW Brian Herczog

- 22 THE FUTURE OF CINEMA: FINDING NEW MEANING THROUGH LIVE INTERACTION Dominic Smith
- **30** A FLEXIBLE APPROACH FOR SYNCHRONIZING VIDEO WITH LIVE MUSIC Don Ritter



AVATAR ACTORS Elif Ayiter

- MULTI-PROJECTION FILMS, ALMOST-CINEMAS AND VJ REMIXES: SPATIAL ARRANGEMENTS OF MOVING IMAGE PRESENCE Gabriel Menotti
- 78 MACHINES OF THE AUDIOVISUAL: THE DEVELOPMENT OF "SYNTHETIC AUDIOVISUAL INTERFACES" IN THE AVANT-GARDE ART SINCE THE 19705 Jihoon Kim
- 88 NEW PHOTOGRAPHY: A PERVERSE CONFUSION BETWEEN THE LIVE AND THE REAL Kirk Woolford



- TEXT-MODE AND THE LIVE PETSCII ANIMATIONS OF RAQUEL MEYERS: FINDING NEW MEANING THROUGH LIVE INTERACTION Leonard J. Paul
- 124 OUTSOURCING THE VJ: COLLABORATIVE VISUALS USING THE AUDIENCE'S SMARTPHONES Tyler Freeman



- AVVX: A VECTOR GRAPHICS TOOL FOR AUDIOVISUAL PERFORMANCES Nuno N. Correia
- **148** ARCHITECTURAL PROJECTIONS: CHANGING THE PERCEPTION OF ARCHITECTURE WITH LIGHT Lukas Treyer, Stefan Müller Arisona & Gerhard Schmitt



**IN DARWIN'S GARDEN: TEMPORALITY AND SENSE OF PLACE** Vince Dziekan, Chris Meigh-Andrews, Rowan Blaik & Alan Summers

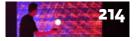


BACK TO THE CROSS-MODAL OBJECT: A LOOK BACK AT EARLY AUDIOVISUAL PERFORMANCE THROUGH THE LENS OF OBJECTHOOD Atau Tanaka



STRUCTURED SPONTANEITY: RESPONSIVE ART MEETS CLASSICAL MUSIC IN A COLLABORATIVE PERFORMANCE OF ANTONIO VIVALDI'S FOUR SEASONS Yana (Ioanna) Sakellion & Yan Da

202 INTERACTIVE ANIMATION TECHNIQUES IN THE GENERATION AND DOCUMENTATION OF SYSTEMS ART Paul Goodfellow



SIMULATING SYNESTHESIA IN SPATIALLY-BASED REAL-TIME AUDIO-VISUAL PERFORMANCE Steve Gibson

- 230 A 'REAL TIME IMAGE CONDUCTOR' OR A KIND OF CINEMA?: TOWARDS LIVE VISUAL EFFECTS Peter Richardson
- **240** LIVE AUDIO-VISUAL ART + FIRST NATIONS CULTURE Jackson 2bears



OF MINIMAL MATERIALITIES AND MAXIMAL AMPLITUDES: A PROVISIONAL MANUAL OF STROBOSCOPIC NOISE PERFORMANCE Jamie Allen

- 272 VISUALIZATION TECHNOLOGIES FOR MUSIC, DANCE, AND STACING IN OPERAS Guerino Mazzola, David Walsh, Lauren Butler, Aleksey Polukeyev
- **284** HOW AN AUDIO-VISUAL INSTRUMENT CAN FOSTER THE SONIC EXPERIENCE Adriana Sa



GATHERING AUDIENCE FEEDBACK ON AN AUDIOVISUAL PERFORMANCE Léon McCarthy

- 322
- CHOREOTOPOLOGY: COMPLEX SPACE IN CHOREOGRAPHY WITH REAL-TIME VIDEO Kate Sicchio



CINEMATICS AND NARRATIVES: MOVIE AUTHORING & DESIGN FOCUSED INTERACTION Mark Chavez & Yun-Ke Chang

352

IMPROVISING SYNESTHESIA: COMPROVISATION OF GENERATIVE GRAPHICS AND MUSIC Joshua B. Mailman

## When Moving Images Become Alive!

"Look! It's moving. It's alive. It's alive.. It's alive, it's moving, it's alive, it's alive, it's alive, IT'S ALIVE!" *Frankenstein* (1931)

Those who still see – and there are many in this camp – visuals as simple 'decorations' are living in a late 19th century understanding of media, with no realization that an immense cultural shift has happened in the late 20th century when big data, sensors, algorithms and visuals merged in order to create 21st century constantly mediated social-visual culture.

Although the visuals are not actually alive, one cannot fail to grasp the fascination or evolution that visuals and visual data have embarked upon. It is no longer possible to see the relationship of the visual as limited to the space of the traditional screens in the film theater or at home in the living room with the TV. The mobility of contemporary visuals and contemporary screens has pushed boundaries – so much so that 'embeddedness' of visuals onto and into things is a daily practice. The viewers have acquired expectations that it is possible, or that it should be possible, to recall the image of an object and to be able to have that same object appear at home at will. The process of downloading should not be limited to 'immaterial' digital data, but should be transferred to 3D physical objects. 1

Images are projected onto buildings – not as the traditional trompe l'oeil placed to disguise and trick the eye – but as an architectural element of the building itself; so much so that there are arguments, including mine, that we should substitute walls with projected information data, which should also have and be perceived as having material properties (see in this volume "Architectural Projections" by Lukas Treyer, Stefan Müller Arisona & Gerhard Schmitt).

Images appear over the architecture of the buildings as another structural layer, one made of information data that relays more to the viewer either directly or through screens able to read augmented reality information. But live visuals relay more than images, they are also linked to sound and the analysis of this linkage provides us with the opportunity "to think about the different ways in which linkages between vision and audition can be established, and how audio-visual objects can be composed from the specific attributes of auditory and visual perception" (see "Back to the Cross-modal Object" by Atau Tanaka).

iPads and iPhones – followed by a generation of smarter and smarter devices - have brought a radical change in the way reality is experienced, captured, uploaded and shared. These processes allow reality to be experienced with multiple added layers, allowing viewers to re-capture, re-upload and re-share, creating yet further layers over the previous layers that were already placed upon the 'original.' This layering process, this thickening of meanings, adding of interpretations, references and even errors, may be considered as the physical process that leads to the manifestation of the 'aura' as a metaphysical concept. The materiality of the virtual, layered upon the 'real,' becomes an indication of the compositing of the aura, in Walter Benjamin's terms, as a metaphysical experience of the object/image but nevertheless an

experience that digital and live visuals are rendering increasingly visible.

"Everything I said on the subject [the nature of aura] was directed polemically against the theosophists, whose inexperience and ignorance I find highly repugnant.... First, genuine aura appears in all things, not just in certain kinds of things, as people imagine."

The importance of digital media is undeniably evident. Within this media context of multiple screens and surfaces the digitized image, in a culture profoundly visual, has extended its dominion through 'disruptive forms' of sharing and 'illegal' consumption. The reproducibility of the image (or the live visuals) – pushed to its very limit – has an anarchistic and revolutionary element when considered from the neocapitalistic perspective imbued in corporative and hierarchical forms of the construction of values. On the contrary, the reproducibility of the image when analyzed from a Marxist point of view possesses a community and social component for egalitarian participation within the richness of contemporary and historical cultural forms.

The digital live visuals – with their continuous potential of integration within the blurring boundaries of public and private environments – will continue to be the conflicting territory of divergent interests and cultural assumptions that will shape the future of societal engagements. Reproducibility will increasingly become the territory of control generating conflicts between *original* and *copy*, and between the layering of *copy* and *copies*, in the attempt to contain ideal participatory models of democracy. The elitist interpretation of the aura will continue to be juxtaposed with models of Marxist participation and appropriation.

Live visuals projected on public buildings and private areas do not escape this conflict, but present interpretations and forms of engagements that are reflections

of social ideals. The conflict is, therefore, not solely in the elitist or participatory forms of consumption but also in the ideologies that surround the cultural behaviors of visual consumption.

Object in themselves, not just buildings, can and may soon carry live visuals. There is the expectation that one no longer has to read a label – but the object can and should project the label and its textured images to the viewer. People increasingly expect the object to engage with their needs by providing the necessary information that would convince them to look into it, play with it, engage with it, talk to it, like it and ultimately buy it.

Ultimately there will be no need to engage in this process but the environment will have objects that, by reading previous experiences of likes and dislikes, present a personalized visual texture of reality.

Live visuals will provide an environment within which purchasing does not mean to solely acquire an object but rather to 'buy' into an idea, a history, an ideology or a socio-political lifestyle. It is a process of increased visualization of large data (Big Data) that defines and re-defines one's experience of the real based on previously expressed likes and dislikes.

In this context of multiple object and environmental experiences it is also possible to forge multiple individualized experiences of the real; as much as there are multiple personalized experiences of the internet and social media through multiple avatar identities (see "Avatar Actors" by Elif Ayter). The 'real' will become a visual timeline of what the algorithm has decided should be offered based on individualized settings of likes and dislikes. This approach raises an infinite set of possibilities but of problems as well. The life of our representation and of our visuals is our 'real' life – disjointed and increasingly distant from what we continue to perceive as the 'real real,' delusively hanging on to outdated but comfortable modes of perception.

The cinematic visions of live visuals from the 19th century have become true and have re-designed society unexpectedly, altering dramatically the social structures and speeding up the pace of our physical existence that constantly tries to catch up and play up to the visual virtual realities that we spend time constructing.

If we still hold to this dualistic and dichotomist approach of real versus virtual (although the virtual has been real for some time and has become one of the multiple facets of the 'real' experience), then the real is increasingly slowing down while the virtual representation of visuals is accelerating the creation of a world of instantaneous connectivity, desires and aspirations. A visuality of hyper-mediated images that, as pollution, pervades and conditions our vision without giving the option of switching off increasingly 'alive' live visuals.

The lack of 'real' in Jean Baudrillard's understanding is speeding up the disappearance of the 'real' self in favor of multiple personal existential narratives that are embedded in a series of multiple possible worlds. It is not just the map that is disappearing in the precession of simulacra – but the body as well – as the body is conceived in terms of visual representation: as a map. These multiple worlds of representations contribute to create reality as the 'fantasy' we really wish to experience, reshaping in turn the 'real' identity that continuously attempts to live up to its 'virtual and fantastic' expectations. Stephen Gibson presents the reader with a description of one of these worlds with live audio-visual simulations that create a synesthetic experience (see "Simulating Synesthesia in Spatially-Based Real-time Audio-Visual Performance" by Stephen Gibson).

If this fantasy of the images of society is considered an illusion – or the reality of the simulacrum, which is a textual oxymoron at prima facie – it will be determined through the experience of the *live visuals becoming alive.* 

Nevertheless, stating that people have illusory perceptions of themselves in relation to a 'real' self and to the 'real' perception of them that others have only reinforces the idea that Live Visuals will allow people to manifest their multiple perceptions, as simulated and/or real will no long matter. These multiple perceptions will create multiple ever-changing personae that will be further layered through the engagements with the multiple visual environments and the people/ avatars that populate those environments, both real and virtual.

In the end, these fantasies of identities and of worlds, manifested through illusory identities and worlds within virtual contexts, are part of the reality with which people engage. Although fantastic and illusory, these worlds are a reflection of a partial reality of the identity of the creators and users. It is impossible for these worlds and identities to exist outside of the 'real.' This concept of real is made of negotiated and negotiable frameworks of engagement that are in a constant process of evolution and change.

The end of post-modernity and relativism may lead to the virtuality of truism: the representation of ourselves in as many multiple versions – already we have multiple and concurrent digital lives – within the world/s – ideological or corporate – that we will decide or be forced to 'buy into.' It is this control of the environment around us and us within that environment that will increasingly define the role that live visuals will play in negotiating real and virtual experiences. The conflict will arise from the blurred lines of the definition of self and other; whether the 'other' will be another individual or a corporation.

The potential problems of this state of the live visuals within a real/virtual conflict will be discovered as time moves on. In the end this is a giant behavioral experiment, where media and their influences are not analyzed for their social impact *ex ante facto*; this is something that happens *ex post facto*.

Nevertheless, in this ex post facto society there are some scholars that try to understand and eviscerate the problems related to the process of visuals becoming alive. This issue collects the analyses of some of these scholars and embeds them in a larger societal debate, hinting at future developments and problems that society and images will have to face as the live visuals become more and more alive.

The contemporary concerns and practices of live visuals are crystallized in this volume, providing an insight into current developments and practices in the field of live visuals.

This issue features a new logo on its cover, that of New York University, Steinhardt School of Culture, Education, and Human Development.

My thanks to Prof. Robert Rowe, Professor of Music and Music Education; Associate Dean of Research and Doctoral Studies at NYU, for his work in establishing this collaboration with LEA.

My gratitude to Steve Gibson and Stefan Müller Arisona, without them this volume would not have been possible. I also have to thank the authors for their patience in complying with the guidelines and editorial demands that made this issue one that I am particularly proud of, both for its visuals and for its content.

My special thanks go to Deniz Cem Önduygu who has shown commitment to the LEA project beyond what could be expected.

Özden Şahin has, as always, continued to provide valuable editorial support to ensure that LEA could achieve another landmark.

**Lanfranco Aceti** Editor in Chief, Leonardo **Dec.to.lic** Almanac Director, Kasa Gallery

- 3D printing the new phenomenon will soon collide with a new extreme perception of consumer culture where the object seen can be bought and automatically printed at home or in the office. Matt Ratto and Robert Ree, "Materializing Information: 3D Printing and Social Change," *First Monday* 17, no. 7 (July 2, 2012), http://firstmonday.org/ojs/index.php/fm/article/ view/3968/3273 (accessed October 20, 2013).
- Walter Benjamin, "Protocols of Drug Experiments," in On Hashish, ed. Howard Eiland (Cambridge, MA: Harvard University Press, 2006), 58.
- 3. "The point here is not to issue a verdict in the debate between Adorno and Benjamin, but rather to understand the debate between them as representing two sides of an ongoing dialectical contradiction." Ryan Moore, "Digital Reproducibility and the Culture Industry: Popular Music and the Adorno-Benjamin Debate," Fast Capitalism 9, no.
  1 (2012), http://www.uta.edu/huma/agger/fastcapitalism/9\_1/moore9\_1.html (accessed October 30, 2013).
- Paul Virilio, Open Sky, trans. Julie Rose (London: Verso, 1997), 97.

10 LEONARDOELECTRONICALMANAC VOL 19 NO 3



# la Biennale di Venezia Arte Arte Danza Danza Teatro Archivio Storico