Inhabiting the Observatory. Living and creating inside the Electronic Space.
“Inhabiting the Observatory. Living and creating inside the electronic space”
José R. Alcalá *

Summary
The Internet—and the cyberspace it contains—is beginning to be colonized. Making its geography visible—poietically revealing it—plotting out the cartography of its topological (non-)spaces, is a task that is as pressing as it is necessary. It has established itself in a variety of paradoxes, like that of being a “non-spatial” place, or using “liquid architecture” that operates within a “hybrid reality” of its own construction, or modifying the concept of “spatial-temporal memory” (which must now be traced and formalized, through geometrizing the process-in-real-time, and not through the traditional architecture of objects). These cartographies will sketch out not only the liquid morphology of architectural (non-)spaces, lending form to a phenomenological reality (which, in spite of being inhabited, still remains to be visually revealed), but most importantly, will plot the topographical map of the symbolic relationships between the cultural, economic and political organizations of contemporary society. In other words, class divisions, hierarchies, functional roles played by the global economy and also the political organization of the contemporary world.

So then, considering and developing the liquid architecture of electronic space in the context of the hybrid reality in which we each live in the 21st century, includes by definition the conceptualization and design of the cultural interface that will equip us with the devices, with the mechanisms and the strategies, necessary for gaining the capacity to inhabit that reality.

This text is a development of several personal ideas and conclusions drawn from the many creative and research experiences resulting from twenty years of working with new technologies and digital processes. The theoretical body of the text is supported by a series of fundamental texts recently put together by the most lucid contemporary minds. Here, they serve as a premise for the deeper understanding of this text and its necessary contextualization.

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1. Inhabiting Reality

The soul expands,
it becomes the very eye and contemplation of the world:
“Hold it right there, you beautiful thing!”

Peter Sloterdijk

1

We begin with an essential acknowledgement:
Every person literally imagines his world.

Kevin Power


Until recently, we essentially lived in a biological reality, which is not only that, but rather “the perception and the understanding of the universe according to each species’ specific biology”

2, according to the senses that can register these, and which represent only a slight portion of the immense spectrum that is reality. “Biological reality has a profound influence on a human being’s perception of herself, so much so in fact that Metaphysics emerges out of it. We come to terms with birth, life, death and suffering through and because of biological reality.”

3

“But Homo sapiens sapiens is born with more than biological reality. Since tools were first created, human beings have found themselves immersed in technological reality”

4, which is but an extension of biological reality. “The perception of the world through both human and non-human senses (including machine and scientific ‘senses’).”

5

 Nonetheless, the technological reality described here by Dyens cannot really be inhabited, as “this would assume that we can still distinguish between humanity, animal species, dynamic systems, technologies and culture; it would presume that matter, whether organic or metallic, whether analogue or digital, chemical or binary, can be clearly subdivided. We now dwell beyond technological reality. We constitute a whole, whether we like it or not. Humans, machines, biological or artificial networks are all intertwined into the planetary framework”

6 where our perception and our knowledge of reality have undergone a profound transformation.

But we would be suspect of technophile if we defended the current inhabitability of this technological reality, which seems so “foreign to us, so distanced from biological reality, that one can equate the role of the scientist to that of the shaman. Like the shaman, only the scientist knows the true structure of the world. Like the shaman, only the scientist has access to, and understands how to penetrate the true levels of reality.”

2 DYENS, O.: “Hybrid Reality”, Published in the catalog Hybrid. Living in Paradox, from the Ars Electronica Festival 2005, held in Linz, Austria in September, 2005. p.45.
3 Ibid., p.45.
4 Ibid., p.45.
5 Ibid., p.45.
6 Ibid., p.46.
7 Ibid., p.47.
What is certain is that everything has changed, and quite awhile ago. Now, “the boundaries of life, death, and birth, the secrets of creation, the emergence of the conscious and the infinite, are being reworked and amplified. Man and his world are no longer stable and well-defined structures. Our universe is now a transparent realm, whose definitions are brittle and evanescent—a cosmos not of immovable facts but of constantly changing possibilities.”

So then, today we live in a reality that does not reach its fullness under the technological reality described by Dyens. A reality which shares our limitations and our prosthetic extensions. A reality which might be called hybrid and which unveils the inhabitability of those “grey areas” where art—and above all, digital art—works so well, so harmonically. “A reality that considers physical phenomena (bodies, organic matter, flash, individuals) as visible expressions of something else. For hybrid reality, biology is like a wave on the ocean: a transparent and ephemeral shape, inseparable from its whole, and resulting from infinitely complex and hidden interactions. For hybrid reality, the structures of life, intelligence, consciousness and even, one might dare to say, of soul, are unintelligible without the help of extra ‘senses’ (those of machines, science, mathematics, etc.).”

“In essence, hybrid reality suggests the profound displacement of human beings in the planetary hierarchy as well as in the very essence of meaning.”

2. Looking at the World. Looking at Humans.

2.a. Iconographies of Techno-science. Images of Philosophy.

The real voyage of discovery,
    of new-found youth,
consists not in seeking new landscapes,
    but in having new eyes.
    Marcel Proust.

Man’s way of looking at the reality he inhabits and looking at himself has been profoundly influenced—conditioned, deformed—by the new images that have been constructed by the techno-sciences over the last two centuries, a period of spectacular development. Thus, para-optical medical images, biological microscopic slides, spaces created by telescopic lasers in space-age astronomy, computer de-coders, etc., have become alternative social imagery for all things photographic, optical, retinal, which the vision of our western culture has enforced on the world during the last eight centuries.


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10 PROUST, Marcel: *In Search of Lost Time.*
The thinking of each age is reflected in its technology.

N. Wiener 11

In a unique way, mainly because of the influence they hold over artistic practices, technologies and digital processes of audiovisual and communicative information have played a large role in the renewal of the collective imagination of today. This has taken place through the construction of new and fabulous iconographies based on the simulative potential of technological processes and in the formal specificity of pixel landscapes in binary electronic images (two clearly opposed lines which are also retroalimentary).

Thanks to these, electronic artists have been able to work in a multitude of creative directions, building digital imagery that works toward the formalization —using Heidegger’s concept of poiesis— of thought, vision, dreams and fantasies regarding artifice and inhabitants of this newly budding culture, which now reclaims a fundamental role in the consolidation—for the inhabitability—of this new world which we have blessed ourselves with.

3. Thinking out the Space.


There where things happen, where people live, in the widest sense of the word, is probably where space forgets its insipid and cold existence and takes comfort in the experience of place. Following this logic, that which is known as public space is doubtless a place without which the city, or any aspiring community, makes no sense.

Cira Pérez Barés. 12

In general, we had not paid much attention to the differentiation between the terms Space and Place, until we created cyberspace. That sort of slice of virtualized reality in whose beginnings everything seemed to be surveyed, marked out, measured and defined, has nevertheless gotten out of hand, making itself immeasurable and becoming not only the electronic space of contemporary communication, but a tangible body capable of containing all of the knowledge generated by our vast contemporary informational capabilities. And it has only been a decade and a half.

Now that we have begun to use it, we notice the subtle but fundamental difference that exists between Space and Place. Thanks to studies like those of Verónica Zidarich, we understand and accept that Space can be understood as any portion of the Earth that is wild, wide, unknown, strange and dangerous, and has not been transformed by human intervention, as constructed space is a transformation of “pure” space or of the wild

12 PÉREZ BARÉS, Cira, Culturas, # 217, La Vanguardia, Barcelona, 2006. p. 16.
external surroundings into an entity that satisfies human needs. “Space has characteristics but never character. Space is clearly one of the main components of architecture, and has been defined by Gnemmi as the ‘emptiness remnant,’ enclosed within limits to give it a function. This space is understood to be ‘limited, finite, conformed, classified, and containing.’ It is not only functional but also expressive. Small or big, space is perceived as limited. The sense and perception of architectural space evolved from the first attempt to define it in Hellenistic thought, when it was envisioned as a container, to modern space where, with the contribution of Einstein, it became relative.” \(^{13}\)

Meanwhile the idea of Place is something more than “just relative locations where certain interactions occur and specific functions are served. Places are thus centers of action and interaction. [...] The notion of place goes beyond physical matter and transcends material, physical, tangible qualities such as size, proportions, and features. Places possess intangible qualities, which are based on the unique impressions of experiences.” \(^{14}\)

Thus, we must understand and absorb that Space and Place are not the same thing. “It is a general assumption that Place is a smaller part of a Space. This is partially correct, but the differences between Place and Space go beyond physical attributes such as size and location. [...] The process of transformation from ‘Space’ to ‘Place’ involves emotional experiences [...] Through time and human intervention, a ‘raw’ space becomes a place full of significance and meaning. In a certain sense, Place can be understood as a smaller part of Space transformed by human intervention, with a particular meaning. Places are thus centers of action and interaction. [...] While individuals and space are independent and divisible entities, individuals and place cannot be divided and distinguished, because Place does not exist without human intervention.” \(^{15}\)

In this sense, it is particularly interesting to look at eastern cultures and their idea of space-time. This concept has enjoyed a great deal of influence, not only in the arts—for example, Zen gardens—but throughout Japanese philosophy. Today, this way of thinking provides this budding electronic world-culture—founded by the Anglo-Saxon culture—with brilliant creative geniuses capable of conceptually laying the foundation for the creative work in electronic communication spaces—so complex with regard to the Germanic notion of space, and so useful to Western artists.

3.b. The Electronic (non-)Space of Communication.

3.b.i. Mapping Electronic Space.

Now that we have begun to investigate—to navigate—cyberspace, using its contents and moving through its informational lexemes and nodes, we experience the intellectual-sensational feel of the inhabited “place” for the first time. It invites us to formalize it, to make it visible. It ties us in time to those navigators and discoverers of the 16\(^{th}\) century, who were faced with a similar challenge: the need to make charts of

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\(^{14}\) Ibid.

\(^{15}\) Ibid.
this “new world”, paving the way for maps that allow us to familiarize ourselves with it, to inhabit it, and to utilize it.

Its essence as “space/place” can only be recognized insofar as we can travel around it, and we do so by means of this virtual (non-)space. Thus, we strive to extend our extremities (now expanded prosthetically thanks to digital technology) in an attempt to “trap”—to feel—that certain “slice of space,” using digital mapping technologies and hence trying to become familiar with the exact position of each one of its points in-process. In this way we participate in an “online” version of the science of topography, inventing and developing “trace-route” programs that make visible sections of explored space—as an aligned succession of said digital-points-in-process—and of certain electronic places in cyberspace, in order to achieve at last the longed-for portrait of the “body” of cyberspace.

The internet has dubiously become the vector of a new geography, not only for the immaterial “realities” it reveals, but also because it alters our perception of the reality we have inhabited until now.

Maps are based on abstract information by which they are formalized, and make logical configuration possible. In the 1980s, Frederick Jameson was already speaking of the necessity of a new articulation between these two cartographic parameters. It would be necessary to work, on the one hand, with the epistemological structures resulting from the use of these new technical devices, and on the other hand, with the unfolding of new iconographies with which artists would model new socio-cultural imagery.

To this end, we propose broadening the field of performance with regard to the (non-)space which is the internet. Currently, we are able to apply cartographic techniques (just as we can use the science of topography) to the process of conceptualizing the limits and continuity of said space (like electronic places) provided by topology.

In this way, throughout the last decade, we have participated in the unstoppable flowering of extremely diverse proposals which make reference to the impulse and the necessity to map the web in order to be able to understand the magnitude, the physiognomy and the peculiarities of its architectural space. Such is the case with Web Stalker from group I/O/D 4, an interesting experimental browser-art project which included a mapping function with website URLs from the internet, or Mapping the Web Infome, another project not to be missed within the camp of browser-art, based on this same mapping (or cartographical) impulse, and the brain-child of artist Lisa Jevbratt. Consisting of the creation of software that would permit the tracking and visualization of websites, the project would allow for the production of three different kinds of “maps”: graphics tied together with color, maps using pixel points, and lists of

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16 Topography is a science which is studied along with a set of methods in order to determine the position of a point on the Earth, with regard not only to planimetry but to altitude. From Wikipedia. 2006.

17 Topology is a mathematical discipline which studies the properties of topological spaces and their continuous functions. Topology highlights such concepts as proximity, number of openings, and consistency (or texture) found in an object. It is also used to compare objects or for classification using a variety of attributes, including connectivity, compactness, and metricability. Topological space is the basic notion of elemental topology, a field which depends solely upon the theory of sets (it is not constructed using any other thing), and which has important consequences in the field of analysis because it allows for the rigorous definition of continuity and limitations.

html text. This software was utilized by different artists for the creation of personal maps of sections of the web, as in the case of Kazunori Takahashi and Lev Manovich. Most recently, in 2003, M. Aschauer, J. Deinhofer, M. Gusberti, and N. Thonen created /Logicaland, whose version 0.1 was a prototype for the global simulation controlled by a defined community of users. It is based on rw-3, a global model of the developed world from the 1970s written by Fred Kile and Arnold Rabehl in Wisconsin, USA.

But without a doubt, the most complete and revealing project for our purposes is Skitter Graph, written by the Cooperative Association for Internet Data Analysis, or CAIDA. This cartographic technology allows for the visualization of exchanges between some 2500 autonomous systems (internet service providers). This map is produced by 25 computers connected to different points of the Internet, which record a kind of “trace-route” program called Skitter. For a period of about two weeks, the program follows and registers the flow of distinct packets which provide service to more than 1.1 million internet clients, taking into consideration only the flow which is involved in the exchange between two providers or two different networks. The end product is a graphic which illustrates the communication between distinct networks.19

The evocative images coming from the daily stream on the internet “shown here, resembles a strange, nebulous jelly fish against a background of complex density, floating on a black sea. These are the de facto preliminary results of a visualized topology of the internet, of the traffic connections found along the routes of nodes.”20

But the truly important element is that, through this cartographic drive, an aesthetic of critical and non-conformist cartography is being consolidated (as confirmed by critics and thinkers such as Deleuze or Holmes, and as Jameson has already intuited). This theory is capable of removing the visual techniques and languages normally used on maps in order to indicate the mathematical place—the position—of the autonomous agents that begin to work—immersed in that Netocracy described by Söderqvist and Bard21—in the interior of global society. These are, then, the techniques for analyzing the world, but not from the traditional viewpoint of usual political cartography; rather, they are fields of strength which, as Deleuze puts forth, are co-extensions of reality. They do not cover reality as a representation indicating that which pre-exists, but as part of the reality of time, and of relationships which continue to change and transform with time.

All of this leads us to think that, just as the Egyptian pyramid is a structure that symbolizes the hierarchical relationships between power, divinity and social structures, solved by the architecture of (non-)space, and whose construction materials are artefacts that seek perpetuity—in search of absolute truth—thus, the world and the space made visible by all these digital maps could also be considered as a “structure” symbolizing the relationships between “glocal” power centres, the information which circulates through their relative spaces and current social structures (associated with the workings of virtual communities on the internet, or at least those which are present there), and solved by an architecture—now virtualized—of Place, whose constructive material is

nothing more than the flow of information in each moment and its representation in “real time”.

3.b.ii. Finitude and Infinity.

Nature flies from the infinite, for the infinite is unending or imperfect, and Nature ever seeks an end.

*Aristotle* ²²

If the Egyptian pyramid plays with the three dimensions of real space in order to organize itself conceptually from the temporal dimension symbolic of the eternity of the divine, maps obtained by “trace-route” programs play with the two representational dimensions of the informational membrane (the screen), the infinite depth on which electronic space is supported, and its transformation by the “real-sequential” time-line, sketching the construction of its architectonic space from the continual flow of data provided by the driving, sequential mechanics of statistics.

Is the computer screen, then, the limit of electronic space which is nearest the user, who is understood as a property of finite magnitude? Or, put differently, is it only a frame which can be moved at whim in order to show the visually projected space of its latent infinity (deformedly contemplated from the convergent perspective of the eye of said user; which is nothing but the starting point for said visual projection)?

Consequently: What is the substance of electronic (non-)space?

Just like Aristotelian ether, we speak of nothing other than that which conforms and gives meaning to its architecture. That which converts it into place and cartography: information (pure data).

Information is the ether of electronic place, and might even be called its constructive agent.

So then, the dimension of electronic space is physically limited because information is today—and in each moment—quantifiable, measurable; but it is also infinite—unlimited (Aristotle’s *απειρον*)—an able account of the unlimited potential for circulatory information, containable in electronic space, but limited by the finite nature of our language.

For Aristotle, that which has no limit (*περας*) is not exhaustively representable in our thoughts, and as such is unknowable.

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3.c. Designing the Architecture of the Internet.

3.c.i. Doubts and Questions.

“For a major part of history, human beings have been entirely confined to physical space, but in the course of the last century technology enabled an increasingly abstract understanding of the relationship between humanity and our physical environment.” 23

“Until recently, the twice-thinking sapiens that we are, essentially lived in a biological reality”. 24

“We now live in a world made of entanglements and overlaps, a world of hybrid beings and hybrid shapes, of ceaselessness and instability, a world of frailness and universals, a world where neither matter nor reality can ever again be considered unwavering phenomena”. 25

“Telecommunication has changed the perception of distance”. 26

Technology has changed us into prosthetic beings. We have invented digital technology and used it to build the World Wide Web and the electronic space of the communication it inhabits.

“The Internet—and the cyberspace it contains—are beginning to be colonized, but we still haven’t even fully explored its potential, nor are we sure of who we can inhabit it”. 27

This entire collection of formulations reveals new paradigms which make us consider and form certain questions. We must begin, then, to formulate these questions, if not in order to respond to them, then at least so that there might be some debate:

- Do human beings in cyberspace actually have the same needs that architecture poses in real life? Is the Internet capable of fulfilling those needs? 28
- Do architects need cyberspace?
- What role, if any, do architects play in cyberspace and on the Internet? 29
- Can we familiarize ourselves with the geopolitical structures of the planet we currently know and use them to develop ourselves without having previously made maps of their topological spaces?
- Is it possible to navigate using these new virtual maps without having previously considered their usefulness, ergonomics and the design of interfaces in the digital world?
- Can an electronic interface assume the rank of “Cultural Interface”? 29

25 Ibid., p.45.
27 Ibid. p. o/n.
28 Ibid. p. o/n.
29 Ibid. p. o/n.
Aren’t the Internet and its architectural cyberspace—in its current version as hyper-media and multi-layered metatext—the most precise and appropriate metaphors that can be used to describe and manage the flood of information that circulates on the Web in an effort to achieve the knowledge spread by liquid culture?
- Is digital art the best strategy for tackling such an enormous task?


“The break with notions of Cartesian space has meant a transformation in the way architecture is reflected and designed and in the way in which it surfaces as a material fact”.

Jesse Reiser and Nakano Umemoto  

“...There is a major difference between the physical and the virtual worlds. While the physical world exists a priori, with mankind being born into it, the virtual world has been voluntarily brought into existence by humans. It is a world that required an inventive act for its existence. In this sense, the Internet as we know it today is merely one out of an infinite number of virtual worlds that mankind can and probably will create—indeed, the Internet already supports a variety of virtual environments (e.g., newsgroups, World Wide Web, chat rooms, etc.)"  

“People have turned to virtual spaces and they are inhabiting them: Virtual communities have proliferated in recent years. Their rapid growth has challenged the traditional notion of community. In the same way, the notions of architecture, space, and place are challenged; it seems that the Internet now needs to provide an infrastructure for social interaction similar to what architecture does. [...] Due to the ephemeral nature of cyberspace, it cannot provide physical shelter for human beings. However, it is able to offer an interesting environment for other human activities, such as socializing, entertainment, education, commercial transactions, and so on. Like architecture space, cyberspace also provides an environment in which basic emotional, psychological and economic needs can be satisfied in a similar fashion.  

“The equivalent of architecture on the Internet might be understood to be the process of creating artifacts in the virtual world—artifacts that organize the space provided by the technical infrastructure—to create meaningful environments for visitors. Just as architecture in the real world conveys a message, the architecture of the virtual world must convey messages to the visitors of that particular environment. [...] We are witnessing the start of a new era in architecture, with a new kind of space emerging: cyberspace. The Internet is a new infrastructure that can be understood as a virtual environment or world. It is a ‘non-physical’ space, intangible but real. It is an architectural space that has not yet been designed. There is an urgent need to organize and design it.  

For more, see: [www.reiserumemoto.com](http://www.reiserumemoto.com)  
31 Ibid. P. o/n.  
33 Ibid. p. o/n.
But when we attempt to face the question of whether architecture on the Internet is ultimately possible, fantasies/problems/limitations come up with regard to web “spaces” (sites) which we have begun to truly construct. At that point, reality appears more somber. “The Internet’s organizational system cannot readily be understood as architecture in the sense that I have used in this research. Function and organization are merely a part of what architecture represents. In general, the appearance of the World Wide Web has more in common with the structure, design and presentation principles of print media than with those employed for building artifacts. The Internet, due to the transient nature of its media, is incapable of supporting or containing architecture. Architecture wraps and contains space as much as it does life. A Web page or a chat room does not provide support for the body. Each is a mind-world, a place for minds to pass through, to absorb and share knowledge and information, of a transient and mental nature. The Internet shares this mental nature with literature, the ancient art of choice for the invention of new realities. Moreover, it provides a place of meeting and communication, escaping the shadow of the printed word. Still, it’s the Internet’s lack of substance and persistence that distinguishes virtual space from architecture.”

“Can architecture have a double existence? This all depends on how architecture is understood. If architecture is interpreted as a bracket around the wide field of art and design, as the art of creation and organization of ‘usable’ space, as the art of ensuring the ‘legibility’ of space, then creation for the Net can be declared architecture. But if architecture is given a more restrictive meaning, if it is defined as an art of haptic qualities, with physical properties and mass, a man-made artifact that gives shelter to the physical body, then certainly creation for the Internet of today cannot be defined as architecture. unless, of course, architecture metamorphoses into transArchitecture. When physical architecture melds with the information flow of cyberspace, when the material artifacts become an expression of and gateway to the virtual world, all limits are overcome.”

- TransArchitecture and Liquid Architecture by Markos Novak,
- Fluid Architecture by Toyo Ito, and
- Hyper-superficial Architecture (N-Dimensional) by Stephen Perrella,

Embody and exemplify these new visions of “non-real” architecture, sources to which the following must be added (although they belong to a purely theoretical plane):

- Cyborg Architecture, which José Pérez de Lama defines, saying that “it would be an architecture composed of interchangeable and autonomous parts/subsystems, arranged in a rhizomatic network, whose process of production and construction is also carried out using a horizontal network of autonomous teams.”

34 Ibid. p. o/n.
35 Ibid. p. o/n.
36 For more, see: http://www.soft.es/pages/documentos/articulos/ALGORITMICA.HTM and also: http://www.hemerodigital.unam.mx/ANUIES/ipn/arte_ciencia_cultura/sep-oct97/arquitec/sec_1.html
4. Inhabiting Electronic Space.

4.a. Fundamentals (Multimediality, Interactivity, Interdisciplinarity, etc.)

In all arts there is a physical element which cannot be treated as it once was, which cannot avoid the energy of modern knowledge and strength. Neither material, nor space, nor time are (nor have they been for the past twenty years) what they have always been. It is necessary to count on such grand novelties transforming all techniques of the arts and operating inventively, perhaps even marvellously modifying the self-same notion of art.

Paul Valery

From now on, the fundamental element of these new technologies will never again be the ability of a hand, but rather the exact measure of material wounded by light.

Gilles Multigner


1. Formation of artist communities throughout countries and disciplines.
2. Investing without material interests.
3. Collaboration without consideration for the appropriation of ideas.
4. The privilege of communication over representation.
5. Immediacy.
6. Immateriality.
7. Temporality.
8. Performance based on a process.
9. Performance without anxiety or fear of possible historical consequences.
10. Parasitism as a strategy.
   a. Movement from the primary fields of supply from the network.
b. Expansion toward infrastructures connected to real life.
11. Banishing boundaries between the public and the private.
12. All in One:
   a. Internet as a means of production, publication, distribution, promotion, dialogue, consumption and criticism.
   b. Disintegration and mutation among artists, administrators, writers, audiences, galleries, theorists, art collectors and museums.

4.b. From Electronic Interface to Cultural Interface.

The limits of my language are the limits of my mind.
*Ludwig Wittgenstein*

The world changes according to what our interfaces do.
The world is the limits of our interface.
We do not interact with the world,
only with the world’s interface.
*Peter Weibel*

The Interface

- The term *interface* between man and computer, or *user interface*, describes the way in which man interacts with equipment,
- Devices for the physical entrance and exit of data are understood as such elements as the monitor, keyboard and mouse. Also integrates the metaphors used for conceiving of the organization of informational data,
- A code can also supply its own model of the world,
- The interface models the way in which users conceive of computers themselves,
- The interface also determines the way in which media objects are considered by means of computer,
- As media are stripped of their original differences, the interface imposes its own logic,
- As data is organized in a determined manner using the computer, the interface produces several clear models of the world.

Cultural Interfaces

- In cultural communication, codes are rarely limited to being neutral means of transport; rather, they generally affect the messages they help to transmit,
- We no longer communicate with computers, but with coded culture in digital form,
- I use the term cultural interface to describe an interface between man,
computer and culture: these are the ways in which computers present cultural facts and allow us to relate to them,

- The language of cultural interfaces is made up mainly of elements from other cultural forms and are already familiar,
- The three most important elements are:
  - Cinema
  - The printed word
  - The interface of general users

- “Cinema” includes mobile cameras, representations of space, staging techniques, narrative conventions and audience activity; in short, the distinct elements of perception, language and cinematographic reception,
- The “printed word” includes a rectangular page containing one or more columns of text, illustrations or other graphics framed by text, pages which follow one another in sequence, with a summary and an index,
- The modern interface between man and computer includes rudiments like the direct manipulation of objects on a screen, overlapping windows, iconic representation and dynamic menus,
- Cinema, the printed word and the interface of users are the main depositories of metaphors and strategies for the organization of information which feeds cultural interfaces.

4.c. Inside-Out. Inhabiting “grey areas.”

There where we find darkness and light at once, we also find the inexplicable.

*Samuel Beckett* 38

EXPERIENCE/ANECDOTE # 1.
The air in Barcelona, or, Does a train carry air from its city of embarkation to its final destination?

Returning from a trip to Barcelona on a high-speed train, the five-year-old child in the seat in front of me asked her mother (about 90 minutes after setting off and about halfway through the journey) if we had arrived in Valencia yet. The mother said no. It was night time, and as the car was lit from within, nothing could be seen outside. Not satisfied with this answer, the girl asked her mother again: “So then, we’re still in Barcelona?”

At that very moment (thanks to the girl’s questions, or rather to my later reflection on it) I understood totally that the girl had really believed that Barcelona was a slice of time-space that travelled with her inside the train. She thought it would only leave her side (as a sort of mobile connective space between two distant realities) when she got off the train at her destination. The air of Barcelona (or perhaps we should say Barcelona-ether) would be converted into a substantial concept—in physical terms—that would pervade the interior of the train car until the moment that one abandoned it.

Such is not the case in physics, which offers its own explanations based on concrete mathematical formulas. But for converts to the digital culture, these questions are settled with these sorts of explanation-reflections. Something, then, has been displaced.

Thus, the question of phenomenon (that which is contributed by a digital life), might be resolved—insofar as those fundamental philosophical concepts which concern us—by observing the relationship between exterior space-time and the interior of an object which travels at great speed from one point to another, like some kind of space teleporter that travels through space at such velocity that, in reality, it is facing only time and is thus connecting two topographical spaces as if by a vacuum tunnel.

This, of course, only makes sense in the context of a culture carved out of mental mechanisms such as those which overlap the representation, the multi-constructational narrative that follows channel-surfing and hypermedia navigation and, in general, the connective mechanisms of the mind distributed from current digital individuals.

EXPERIENCE/ANECDOTE # 2.

5 people; 1 experience: 5 different perceptions; Walid Raad and the experience of Beirut.

There is a video creation by Walid Raad (Lebanon, 1967) in the Collection of Video Art in the Centre Pompidou in Paris and The Atlas Group, entitled “Hostage: The Bachar Tapes”.

Crafted on a series of tapes as an audiovisual narrative of Lebanese citizen Souheil Bachar (low-level employee of the American embassy in Beirut), it describes Bachar’s experience as a hostage of Lebanese militants over a ten-year period (1983-1993).

As described on tapes 17 and 31, after Bachar was taken hostage, he was driven to a basement in the suburbs of Beirut, near the capital city airport. He was forced to live there alongside five American citizens who had also been kidnapped. They were kept in a 3 x 3.5 meter cell for 27 weeks.

Once they had all been freed, each of the five American hostages who had shared the cell with Bachar wrote a book describing the same experience. Each of these five books was totally different. But what really surprised Souheil was that “all five began their books talking about time. Time? Would that be because they wanted to show that what had befallen them had been something unpredictable and unnatural? Possibly…”.
This real experience shows us unequivocally that, despite sharing the same visual space, the same landscape, the bare architecture which was free of references to the outside world, in an inhuman cell of barely nine square meters, each of the six hostages had had a completely different experience. The perceptions described by each of the six men turn this common experience into something personal and non-transferable, despite an unbearable minimalism and stripping-away of individualism.

This reflection prepares us for the fact that struggling with perception and a sense of space-time in cyberspace is an extremely difficult and complex task, considering that it involves a personal and non-transferable experience. I am inspired by the conviction that what we have understood as space and time up to now—as reality—is nothing more than a panel made up of a collage of thoughts derived from individual and subjective experiences just like those I am using now.

**Applications and artistic proposals:**
Romy Achituv and Camille Utterback: “Text-Rain”

5. **Narrating Reality from Electronic Space.**

5. a. **Electronic Narrativity.**

| Evolution of Narrative in Technological Art |
| Contribution of New Technologies to Narrative |
| The Future Space of Communication |

5.b. **Allegorical Images in Digital Society. Metaphors for Cyberspace.**

Language might be said to be what divides reality. For example, the continual spectrum of colour is verbally reduced to a series of separate terms.

_Roland Barthes_

- Jeffrey Shaw: “The Golden Calf”
- Fred Adam: “Eclectro-Aimants”
- MIDE: “Electronic Multi-media On-line Dictionary by Richmond-Santillana”


The electrical extension of the senses as a prosthetic expansion of the body. An informational stream that moves through not only our relational cortex, but also our perception. Modelling the electrical field that makes up our current collective global memory, activating an off-record sensory field, which establishes predetermined behavioural patterns as to the experience of individual intuition and, in some cases, of virtualized collectives. Giving shape to those tense cartographies that constitute the field of action of the expanded mental body (intellectual and sentient), separating the topographical map from its lexemes, its connections and its nodes.

Being electrical is, then, acting from the consciousness of one’s potential as a being-in-the-world, as an operator of virtual data. Once more, we face the world from the constructed image of itself.

I stand with Peter Weibel on the point that we can only deal with the interface of the world, and that its topological structure is nothing more than the sum of images that we have mapped out with and from a feeling of culture. Younger generations already focus on the world using a textural sense provided by the two-dimensional feeling that comes from screens and illuminated projections. They feel comfortable not only in the void which presides over the absence of tactile elements, but in the shelter provided by the prefigured mental architecture of the parametric range of the sensorially dematerialized.

My penultimate great theatrical experience was absolutely revealing in this sense. Seated in the first row of the orchestra section where the performance art piece XXX by the Fura dels Baus was showing, I was surprised to find myself scrutinizing the luminous textures of the great screen which offered up in real time the video recreation of the pornographic sex which, obscenely, opened itself before my senses like a truly flayed body. My vision tried to push the round bulge aside, the skinned and obscene real body of the actress, in order to clear the horizon and see its two-dimensional representation, in focus. When the piece ended and I left the theatre, a thought flooded my head: I had hardly spent any time contemplating the real bodies which, naked—pornographic—nearly wet my epidermis with their fluids. Rather, I had enthusiastically—absorbedly—taken part in the parallel spectacle which was continually projected on the giant screen at the back of the stage, its back to the action. Without a doubt, I was already a culturally cinematographic individual.

Information as projected data stimulates my cognition more than any other information coming from the real world of objects. The interpretation of the world today takes place through an interface based on the metaphoric power of the screen and its projective space, electrically infinite.
I willingly think (dividedly) about the future possibility of a geography of our own consciousness of ourselves. This all depends on the extreme intensification of our interior sensations, which, followed to fruition, will undoubtedly reveal or create within us, a space as real as the space that exists in the material world and which, at the same time, is unreal as a thing. 

*Fernando Pessoa* 39

It seems to me that living is a metaphysical error of material, The negligence of inaction. 

*Fernando Pessoa* 40

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- Research projects leader for the European Community and R&D projects for enterprises like Epson, Apple, Telefónica, Richmond/Santillana, Canon, Xerox, etc. Since 1992.
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- Artist in Residence at the Tokyo Art Lab (Japan 1991-1992), granted by Canon Foundation in Europe.
- Participant at the UNESCO Forums for Art & Industry organized by the International Telecommunication Unit (1996-1998).
- Artistic references (most valuable):

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