

M eta.Design

Technology based on the maximization and computation of information influences organization models (modes of production, work and knowledge) and affects the communication process (code, symbol) and the social relations as well as their specialization. The investigation in information design is thus based on the question of the nature of the recent technological progress and how it influences the definition of design, its methods and purposes.

A technology is never independent or active object, it complements integrally our social and cognitive system; as a medium, it conditions not only communication modes but also the way we perceive and conceive our environment.

The technological developments of the last decades are at the base of the shift from industrial to post-industrial information society, where computation and communication technologies extend our very 'being'. The notions of body, matter, space and time are increasingly defined by the acts of reformation, the structures, processes and systems introducing new parameters of space and time - presence, such as immersion (real/virtual) and levitation (real-time telepresence) as well as new parameters of materiality (nanotechnologies and smart memory materials) or biological (gene technology) ones to its definition. The fusion of sophisticated technical production in nanotechnology and materials, as forms of engineering, product design (biodesign/craft), with digital media binds together substances with living materials - we included - and information technologies, opening a huge scientific and artistic field of explorative for new cultural codes and semantics.

Triggered by technological advances, new codes (semantics) and methods (processes) appear often revealed by the term that is used to qualify them, as for example the word 'design' comes up in the beginning of the last century according to the shift of pre-industrial to industrial society ... > 1. The emergence of the concept of 'design' around the Bauhaus and particularly Eli Lissitzky had the intended purpose of qualifying artistic concepts in relation to the technological and social changes in order to reintroduce them in the concept of art itself.

Design 1900-2000		
Metadesign	Computer Design process + code design	Information society
GENERAL DESIGN	System Design Industrial Design	post industrial society
BALTIMORE	Industrial Design	2. industrial society
ARTS AND CRAFT	Product Design Craft	1. Industrial Society

"...the meaning of all media is the experience of using them extensions of yourself. Meaning is not content but an active relationship" (1977 Marshall McLuhan)

Design (from Latin *signare*) means making something and distinguishing it by a sign, giving it significance. But *Designing* indicates not only the significance of something to us, but also our intention towards it, bridging the gap between the technical tools and the sense of cognitions, disciplines. In the case of the Bauhaus this enlarges the understanding of the area pursued in the definition of new concepts and methods in relation to the ongoing social and cultural processes. But the term of design itself has evolved, as technology did, as industrial design, system design etc. As not exclusive these terms can be and as *metadesign* the development and purposes are, they will affect the definition of disciplines with their own methodology, in relation to the actual technological state.

Nowadays computation and communication technologies provide us with an incremental potential in terms of tools and control which itself leads to the rise of new disciplines, methods and qualities. The current technological and social changes argue that emerging the growing transdiscursive disciplinary fields of information design into a new discipline is potentially the next step.

But to fully understand the questions around information design one has first to understand that it is not only about the use of computers in the design process. It is actually designing the processes in close relation to the specificities of the media and this is both the technical and the cultural levels.

Meta, the design of codes and processes

Marion Auerbach ably presents in those terms: "it is about a unified concept of ideas and interconnected data, and the ways in which these ideas and these data can be edited in a computer system. As every communication system, JC technologies determine a transmission channel (signal, medium), a mea-

sure and a code, but their very own property is to operate on any kind of information in a reflection of a sequential form of elementary reformation coded in a binary language, 0/1 or bitstream. This reduction to a basic and common unit, the binary signal, is a necessary condition of any information processing, computation - formalization, editing - storage, communication - transmission. These processes include actively the manipulation of data through codes from information, which could be expressed like:

{Data <> language/code <> information}

Any information is based on a pattern (a structured combination) legible and traceable after code/giving/transient but always rebounded to a *interpretation* process, a binary data flow. In this manner it is the medium through its inherent processes that receive information as well as the structural level as in the semantic one. Furthermore the process of binary encoding/decoding is also a factor of transmutability (any type of information using the same support passed through the same channels). In this manner, information technologies determine the information space, the network, as a transmission device, having temporal interconnection, a space composed and disseminated by data and the flows, which transport it. The notion of flow being necessarily subordinated to space and time, information that can be described as a spatial-temporal system which dynamic state is the result of processes - it defines the appearance of any information as a temporally state; it is the transportation of all stable "FORM" or "InFORMATION".

The ongoing augmentation in computational power increases the complexity of codes and signs systems and underlines at the same time an iterative passage from hypertextual structures to hypermedia ones. Basically Hypermedia is about the programmatic description of the spatial and temporal structures between distributed any kind of information. In short, each information needs information in order to be processed - it is the Meta-level of information describing the structures, the processes and the codes - it is the passage

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from rough unorganized data to structured accessible and legible information. In Philosophy of Human Sciences, Hegel notes, 'what goes beyond or what is more comprehensive or fundamental'. In Computer Science, *Meta* is a common prefix that refers to 'about'. For example, metadatas is data that describes other data (data about data). One could describe the very computer programming as a meta-language for interacting with a computer. Generally speaking, *meta* defines the semantics of the data roles, as well as the data needed to build any kind of representation. In consequence technology delivers not only content but also through its codes and structures, a specific meaning. This specific meaning is described by the basic information defining a relation between technology, structure, size and content.

These considerations and specificities of information technologies show that as far as design is concerned, one has actually to design the meta-level, i.e. the codes the information will be processed back to technical and representational aspects. This specificity of digital technologies brings up new design methodologies; it reveals the integration of time as an active and open parameter in any form of digital production - becoming a process and system itself.

It is the conception of an open-programmable temporal and spatial structure like for example the one of the hypertext, which as an indexing system allows to interconnect in multi-linear ways any digital information due to unaware (hyperlink) and spatial (spacetime) attributes.

In information technologies the interactive between information and a user even more reveals the design of open processes or systems which integrate the user interaction as an 'active' part in the structure of information itself - as it is present in the hypertext or other multi-linear systems. In consequence in digital media it is far more coherent analyzed in term of process rather than in term of finished products. But information technologies through new forms of organizing, storing and processing data are the expression of new forms of meaning like procedural and circular thought.

From Architecture to Meta-Design

A public library is a place to access information - it represents knowledge, a human value - in networks we represent knowledge to be accessed - it represents shared knowledge, - or informational value.

Architecture and Urbanism are structural and functional disciplines involved in the spatial and temporal organization of social, economic, political... areas/reviews which they also constitute a semantic system of signs and codes. All these aspects define them as organizational disciplines that perceive, analyze and investigate data while imprinting it with a specific significance - meaning.

As disciplines they are based on methods of abstraction and formalization of spatio-temporal systems that bridge the gap between the detailed, 'concrete' levels of meaning, and the extended, 'abstract' ones.

For example the process of conception and realization of a form (building) is relative to its functions or the organization of infrastructural flows, signification and urban structures, already give an understanding of the complexity between structures, systems - sign and language.

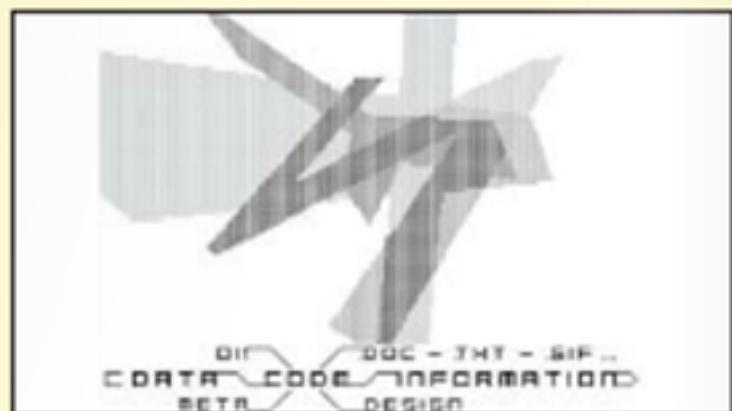
Information flows in the processes of computation, communication and signage are spatial and temporal forms of organization of data based on semantic codes and systems, language while imprinting them with functionality and representation. Therefore a series of relations can be drawn between the practice and methods of architecture and information design in the structuring and visualization of information - like it appears in the development of cartographics, diagrams and maps, graphical user interfaces and hardware interfaces as in the development of the spatial construct itself, like networks and electronic space.

The comparison between communication models, for structures (development + processing) + processes (computation + communication) and spatial constructs (architecture and urbanism) is thus based on its organization of principles binding high level of abstraction within specific modalities of perception and cognition in the context of meaning - semantic level.

'MediaDesign' that displays the theory of how space constructs relate to our social, cultural, spatial structures and flows as much as it operates on the level of language.

In this manner MediaDesign, can be defined as a practice grounded on the logics of computation and communication technologies in the structuring and formalization of media. Major processes in visual, graphical, spatial and multidimensional representations.

In summary, MediaDesign is about the study of codes/language drawn from concepts of communication and information sciences - cognitive science with that of process methods, design and spatial constructs - architecture.



MEDIADESIGN - when concepts turn into methods and processes
"Aesthetics begins as patterns of recognition."

Friedrich Dürrenmatt in Literature, media, information systems, (1997) page 130.

Technologies shape new semantic structures in the common understanding of information, its processes and systems - patterns. MediaDesign thus deals with new 'senses' as components of language, while organizing our cognitive capacities that influence our psychic state (perception), our emotional and social behavior and thus participate as much in the individual project as in the collective. Consequently, in the field of new media, it is important to understand the relation that is established between perception (the use of senses), recognition, comprehension and the representation (the extension of an abstraction), and the action that results from it (production of an intervention). This relation can be defined as 'from sense (senses) to sense (senses)' - focusing on the exploration of the perceptive and cognitive (recognition/extraction) capacities (abilities) between the perceptual and conceptual, the analogue and the digital.

In the determination of a discipline, MediaDesign focuses on the setting of sign and order based on patterns of recognition in order to define an interactive approach in the field of artistic work and practice, able to quantify and systematize its methodologies and to prove the transferability of its theory. It is about aesthetics as a structuring feature of knowledge and culture in order to build up connectivity and efficiency, a *meta-language*.

