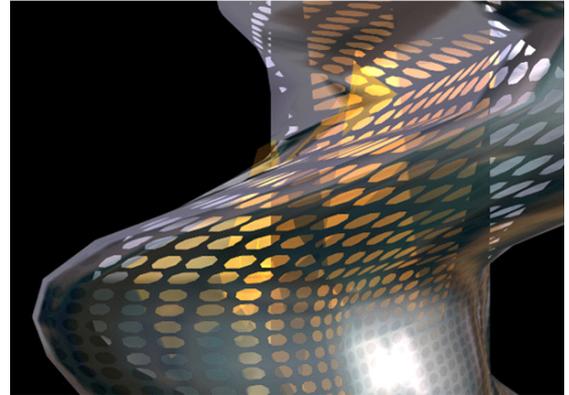


paper



i-skin

electronic bodyness

Manuel Abendroth, Jérôme Decock, Naziha Mestaoui, Christophe Beaufays
LAB[au] . Lab-au@lab-au.com / naziha@electronicshadow.com / crstof@yahoo.com

Abstract

The i-skin project, conceived and realised by LAB[au], laboratory for architecture and urbanism, the fashion designer CRSTOF and Naziha Mestaoui, architect in the scope of Avignon 2000 exhibition 'La beauté', investigates the theme of identity by confronting it with the emergence and the social implications of modern communication and information technologies. By proposing an experience binding physical to digital through the vector of an "avatar", the installation underlines the questions relating to the perception, the representation and the extension of the individual in electronic space.

The i-skin project is a construct on the migration of the human body into the electronic space of communication and computation technologies as a hybrid extension of body, clothing and architecture. The programming of these three skins into one single display includes complex identification and representation codes based on mental and cognitive rather than physical processes.

The programming of behaviors and instructions into form - InFormation - is based on visual communication and identification code-image;

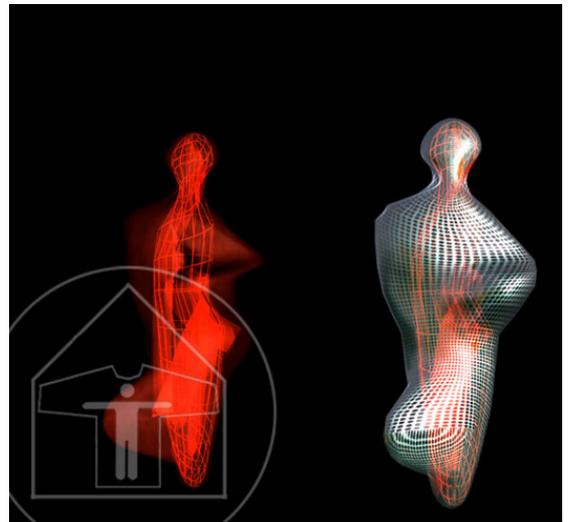
individual identification and social representation codes - identity; processual thinking and programming - interactivity, coding of sign/shapes out of data structures - information.

Keywords: Avataarchitecture – DNArchitecture – Behavior mapping – mixed reality

Project URL: <http://www.i-skin.org>

Year the Work was created : 2000

Project Partners: La Mission 2000
i-skin ; Body - Clothing - Architecture



1. Project Description

Avatar

Today's avatars are mainly figurative representations, simple bodily transpositions possessing limited functionalities, limited codings, they are poor information transmitters.

Yet, an avatar has the potential to become an incorporating vector of communication of the complex cultural and social identification and personal expression codes (mixed reality). Consequently the avatar is the interface that will in the future enable people to experiment virtual environments through new senses and by extending the

communication modes. Just like the face of a human, the avatar is a screen of faciality, an interface which veils and reveals the identity, the character and the expression; it is similar to a skin, being at the same time a mean of protection and a mean of communication.

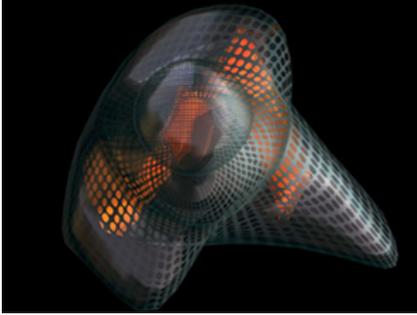


Fig.1 i-skin: avatarArchitecture

The constitution of the i-skin

The project is conceived as an interactive installation introducing each visitor to the creation of such avatar, weaving a link of identification between the person and its double. The visitor participates in real-time to the creation of its avatar, enriches it by selecting images from an interactive slideshow on a touch screen. The 'archetypal' and 'figurative' display (starting point) of the avatar, the i-skin, is transformed, individualised through each choice of the user of images. The images to be selected coming out of three for the user not readable classification categories (body, clothing and architecture), each one influencing one of the parameters and one of the skins, defining the form and the appearance of the avatar. 1. body: influences the colour of the i-skin 2. clothing: influences its texture 3. architecture : sheltering an individual by linking identification processes to representation. The process of creating an i-skin therefore builds up a codification of the avatar appearance by linking the spontaneous associations of the user's panel of selected images to the parameters of the i-skin transformation. The fusion of the 'three skins' in only one representation of the individual thus deals with the codification of appearance and the mapping of behaviors not characterizing the avatar as a blunt figurative representation of the body but rather as a representation of its psyche and behavior, like a mental cartography (Thinkmap). Indeed, the image, vector of complex visual codifications, translates the mental, cognitive and emotional processes leading, through interactivity and identification, to define the personality of an individual or a group.

This method of image mapping has turned into a common step in industrial production in the development and qualification of new product series. The process of creating an avatar, building a representation out of images, thus illustrates the link between information and appearance: i-skin, an information skin.



Fig.2 i-skin: information and appearance

The question of identity in electronic space reveals the one of information structures and displays. Therefore, the generation of an i-skin is based on a dynamic process building up the i-skin as a personal display and host of information. Each image is treated as a piece of information transforming the avatar, and, according to the moment it is selected, builds successively a space integrated into the avatar, where it is recorded thus introducing the parameter of time. The 'metaball' moving up and down along the inner spiral of the i-skin defines, each time the user interacts, a point in space. Throughout these co-ordinates the i-tunnel, the inner structure of the i-skin is progressively constituted. This integration of the time parameter to the spatial and structural ones extends the i-skin to an organism processed out of information – as a specific, personal architecture of textures movements and sounds. The processing of specific forms through information- inFORMing - combined with the archetypal display of the i-skin and the recording of behaviors even more extend the question of identity from visual, to cultural a social parameters and determinates the question of identification throughout cognitive and mental parameters.

This assemblage operates like a DNA spiral, a set of processual information, a transmitted and transmissible structure, and an encoded index of behavior. It is in the complexity of the relations among consulted links and the nature of their original organization in a visual sequence, that the assemblage takes its significance underlining the importance of the constitution of differentiated types yet, all originated from the same elementary material. From this signifying complexity emerges the possible reading of a behavioral structure, like the genotype of the avatar. The avatar thus constitutes a representation on two levels, an external codified "envelope", skin, and an internal space of recorded information.

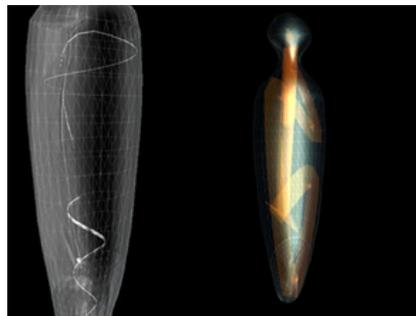


Fig.3 i-skin: skin / i-tunnel

By touching, clicking on, the surface of a I-skin, one crosses this space and sees the information it absorbed, its code or its constitutive images. Therefore the i-skin, vehicle and personal representation, integrates an architecture of interpersonal communication, thus bridging appearance and communication.

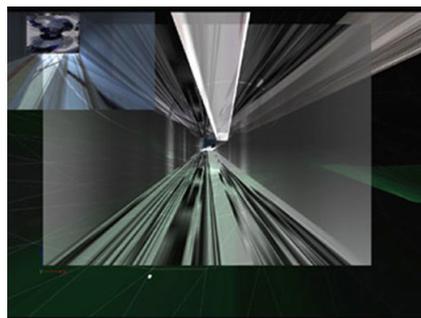


Fig.4 i-skin: individual space , i-tunnel

The collective space of the I-skins

Each i-skin created by a user is automatically placed on a specific space coordinate (x,y,z) in a three-dimensional electronic environment, the collective space.

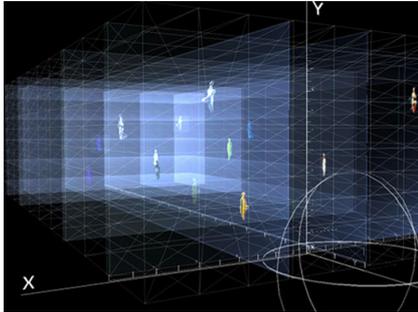


Fig 5 i-skin: collective space / zoom1

The different space coordinates correspond to the average value of users choices calculated according to the image indexing principle, the three classification axis ; (body – clothing – architecture). The 'i-skin' thus constitutes a qualification and quantification of all the user choices, becoming a general evaluation (3D mapping) through the spatialization principle.

The more users create their I-skins the more the collective space reveals densities where users made similar choices. The visitors of the installation can navigate through this space using their own i-skin where the various stages of the navigation system, the "zooms" inside this space, make it possible to have not only a global picture, a statistical vision but ultimately also to discover a person through his/her space of information/code, vision of the individual. The collective space reveals, through the external and internal visions, the processes of personal affection and social sense of belonging.

This AvatarArchitecture is the expression of the hybridization of body space and mind space, fusing abstraction with figuration, identity with representation. AvatarArchitecture is either a device allowing the presence of the user, its extension in the electronic medium but also the translation of self-consciousness.

The installation

Extending the experimentation of a real world enhanced by the digital one, the installation scenography proposes the visitor to penetrate a space where the image turns into architecture merging the electronic space with the concrete one, mixed reality



Fig 6 i-skin: Installation

The visitor is dropped into a highly reflective space, a Plexiglas pleat, a continuous surface banded in space producing a multi-layered architecture. The pleat constitutes the projection screen, with folds to be crossed, creating a game of multiple forms of presence between shadow, reflection and projection combining the physical experience of body space with the mental, digital one.



Fig 7 i-skin: Installation

The installation is based on the construct dissolving the dichotomic relations (like inside-outside, ground and sky...) between surface and space, by fusing these binaries into one single element. Enhanced to information displays, the hypersurfaces describe the passage from the bi-dimensional sheet, the surface, to the n-dimensional space of information - its perception and interaction. So these hypersurfaces can be defined as the programming of information and behaviors in space according to the relation of perception and conception of space and information displays.

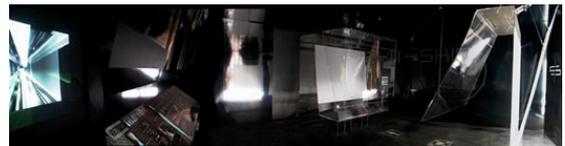


Fig 8 i-skin: mixed reality

Through the themes of the body, clothing and architecture, the entirety of the i-skin project plays with the possibilities that new communication and information technologies offer in the mutation of these concepts and their respective value.

References

- [1] LAB[au], laboratoire d'architecture et d'urbanisme
Manuel Abendroth, Jérôme Decock 19, Quai au Foin B -
1000 Bruxelles e-mail : lab-au@lab-au.com -
<http://www.lab-au.com>
- [2] CRSTOF Christophe Beaufays, fashion designer, 18, Rue
Le Marois F - 75016 Paris e-mail : crstof@yahoo.com -
<http://surf.to/crstof>
- [3] Naziha Mestaoui, architect , 45, av Parmentier F - 75011
Paris
- [4] e-mail:naziha@electronicsshadow.com
- [5] <http://www.electronicshadow.com>