COS
Consciousness of Streams

by
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Introduction

Far from the image of Rodin's Thinker, the contemporary world definitely abandons the idea of an isolated human, forming thought, ideas, concepts and shapes by isolation, contemplation. "Cogito, ergo sum", yes, but thinking becomes a very different practice in respect to what had been envisioned by Descartes, transforming the ideas of contemplation, attention, conception, cognition : influencing and open-sourcing them to a series of additional channels and challenges which are enabled by the extension of our bodies and sensory systems through digital technologies.

Multiple sources, different timescales, contemporaneous, asynchronous, overlapping sources, interleaved attention spans that leave linearity behind in favor of networkedness; unconscious becomes predominant; an informant sound forms from the mutual suggestions that all information samples provide along a polyphonic multidirectional timeline in which interference, difference and noise are possibly the most important things to take into account.

Harmony/linearity leaves the stage, enters noise/nonlinearity, deconstruction, emergency and ubiquitousness. Multiple realities overlap, possibly denying each other and forming a neo-reality, that is browsable, filterable, mixable, mash-up-able, sharable, confrontable, storable, morphable, synthesizable, aggregatable.

Cognitive spaces form around fake, unverifiable, temporary bits of information whizzing by, at incredible speeds, clustering and disassembling along complex emergent patterns: multiple, anonymous, collective. Connect the dots: each emerging shape is different and unrelated, yet it is the explicit expression of the same voices involved.

Time disappears replaced by immaterial places for our traversal: immediatcy; near-past; short time-spans; multiple time scanning; global timezones; recurring times; loops; feedbacks.

COS

The immersion in the global stream of consciousness forming the current cognitive scape can be seen as an emersion. Dive right through media and emerge from the other side, in a reality that completely changes.

COS, Consciousness of Streams, is a complex yet natural initiative imagining the explosion of our human condition into an observable form.

COS is an environment, a series of networked workshops, a performative practice, an observation/representation methodology, and a second order cybernetic system resulting in an open-ended, on-going, multi-author, emergent, ubiquitous publication.

COS aims at disarticulating the practices of human beings and reassembling them from vantage points for expression and investigation: Identity, Time, Emotion, Place.

Each vantage point is a multidirectional observer: COS uses interfaces and interactions to observe individuals who, in turn, observe COS to form their physical and emotional state.

COS produces and analyzes **streams**: as a series of matrioskas, the environment is embedded into its container, and into the physical, digital and hybrid realities. The vantage points can be used to explore any level of this containment/intersectional hierarchy and, in turn, are affected by the whole system and by its individual components.

COS, Consciousness of Streams, hosts the streams of consciousness of the people traversing it or attending its workshops as well as the ones of the global population of the social networks: in, out, in-between, in time, space, relations, difference.

COS is formed by poles focused on the vantage points and implementing interactions that guide individuals through a unique experience through a disassembled reality.

COS gathers all these experiences, and the ones of the people online and transforms them into information, expressing them through **practice** (the workshops), **representation** (the cross-medial environment) and **performance** (the collaborative/performative parts of the workshops).

COS expresses and then observes itself: the technological system embedded in various ways along the whole of COS aim at creating an ongoing experience.

A CMS (Content Management System) uses COS to produce an innovative form of **publication**, whose process does not end with the event: an open-ended, ubiquitous, multi-author, emergent, augmented reality, cross-medial publication that can be printed, interacted with, used through a location based system and by an augmented reality system: layered over the world and its stratified reality, in a continuous stream.

COS Summary

COS, Consciousness of Streams, is an environment/performance dedicated to the research and experience of the human condition in the age of networked, digital information. Its elements define the possibility to investigate into the realms of consciousness, cognition, perception, attention, emotion, relation, and on the ideas of time, space, body and identity which are the main points of transformation of the digital age.

- 4 interactive, sensorial and aesthetic experiences on the themes of Identity, Time, Place, Emotion

- a range of activities in the space of the event and around the city of Berlin

- a range of workshops

- a continuous stream of information, generated both by visitors' interaction at the event's venue and online, trough social network analisys tools and technologies

- a continuous stream of visualization and representation, as emerging from the processes described at the previous points

- a cross-medial publication created by having all the information and visualizations converge into the MACME CMS by FakePress (see Annex A)

- the COS cross-medial system (implemented through the MACME CMS) remains alive ad usable after the event

General Architecture

general architecture
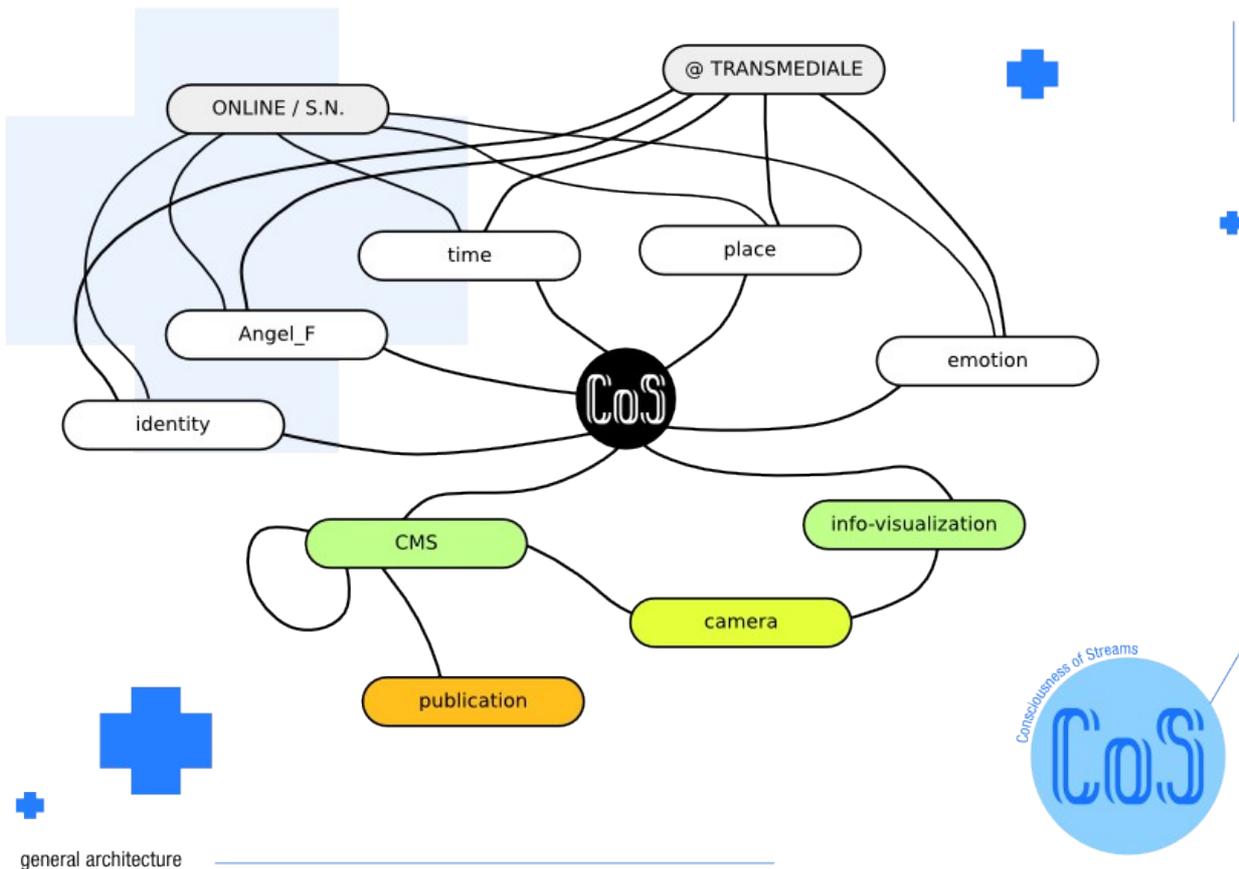
COS lives through enactment of multiple processes focusing on different perspectives through which the contemporary lives of human individuals can be observed. Each of these processes - composed by interactive, workshop/presentation/social-interaction/performance and exhibit components – feeds its specific contribution to the COS system, composed of both digital contents and social/performative elements.

COS will express its emerging results in realtime using two methodologies.

The first is the **generative infovisualization** that will cover a large part of the background of the area where the workshops and social parts of the project will take place. The infovisualization will have multiple perspectives, each one of which will present in a specific way the ever-evolving stream of information related to the themes of the event that is created both by the individuals at the event and by the ones online.
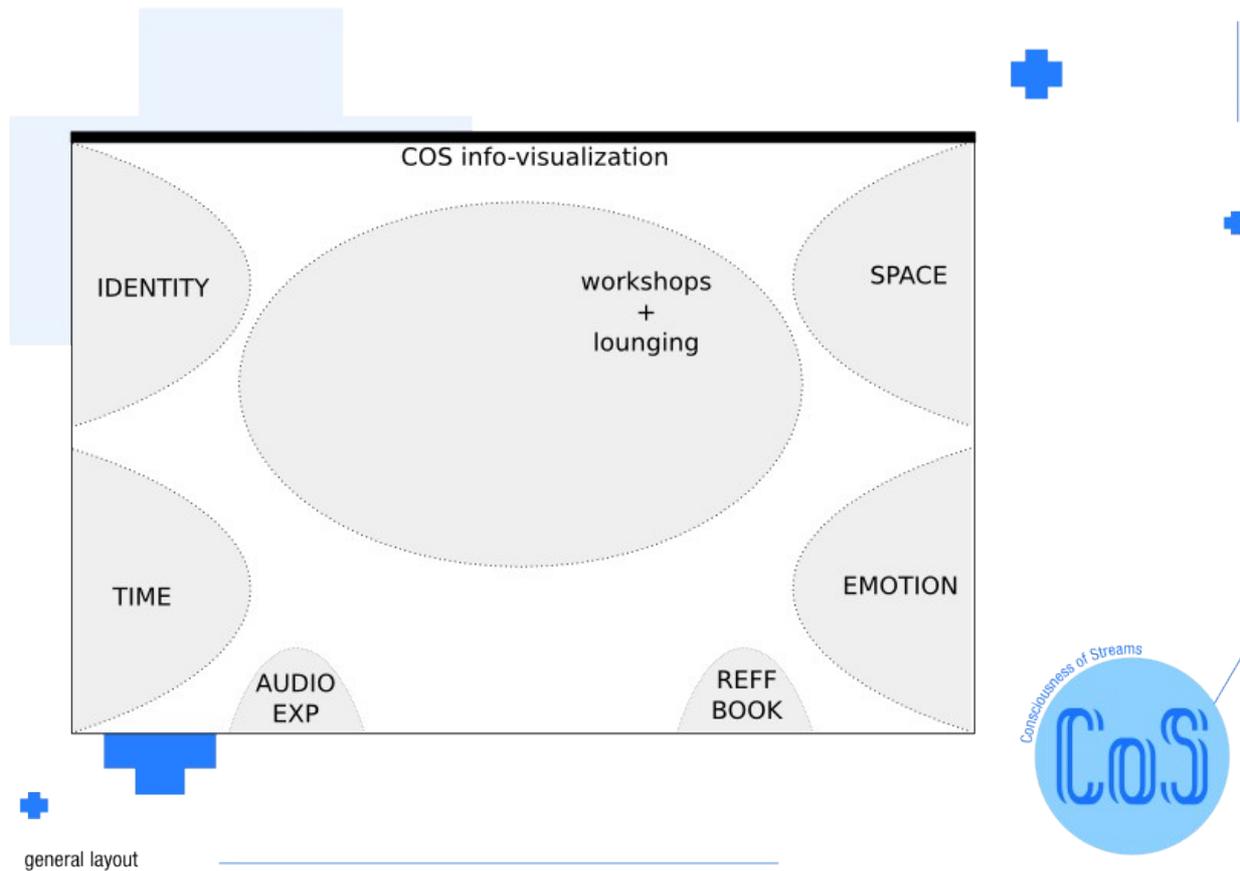
The second one will be implemented through the MACME CMS (by FakePress). The Content Management System (see Annex A) allows for the creation of **cross-medial publications** that are built through the continuous interactions of the users. The publication is more than a book, as it is perfectly integrated with the technological system allowing for multiple modes of interaction with information: location based, augmented reality, spime, hyperlinking to digital resources directly from book pages using QRCodes, accessing realtime information from paper, places and objects using QRCodes, Fiducial Markers and Augmented Reality. The CMS produces the publication by including the contents created in COS into a multi-channel fruition mechanism: a PDF ready for print can be generated in realtime, and it will include all the content, coupled with the codes and markers needed to access the augmented, ubiquitous and cross-media contents.

The CMS will be released as Open Source software for innovative cross-medial publishing during the event, and it will be the theme of one of the workshops.

COS will participate to its own stream also by observing itself and including itself into the publication: a camera will film all of the evolution of the infovisualizations, for the whole duration of the event, and this capture will be added as one of the visual, time-based and timeline-integrated contents.

The process will not finish with the end of the event, as the CMS will be left working for further enhancement of the publication's contents.

General layout of the space

COS info-visualization

IDENTITY

workshops + lounging

SPACE

TIME

EMOTION

AUDIO EXP

REFF BOOK

Consciousness of Streams

CoS

general layout

Four themed areas will form 4 perspecives – detailed in the following sections of the document -.

Each one of them will explore from a specific point of view the ways in which human individuals experience the conditions of being immersed in continuous streams of multidirectional, asynchronous, multi-temporal, multi-vidual, disseminated, emotional, relational, ubiquitous information, and the ways in which these conditions transform the ways in which we learn, relate, imagine, work, create.

Each will involve both the people at the event, the networked online population, living their digital lives on social networks and the individuals in the physical space of the city, which will be involved in some of the activities of the workshops.

The COS info-visualzation will be projected so that it covers all (or most) part of the backround of the project space. The infovisualization will observe all the perspectives generating a stream of information that will be represented using multiple methodologies. The focus of the representation will be the creation of a continuous stream of information, interaction, relation, traversing the spaces of the event, of the city and of the entire global world, interconnected through networks and digital relations.

The whole content produced will be organized into a cross-medial publication. This will result from directing all generated information, interactions and actions into the MACME Content Management System (Annex A).

The system will be setup to live beyond the end date of the event, so that it will keep being accessible online and through all the other fruition channels (mobile, location based, augmented reality, QRCode-based).

The CMS implements a **relational ecosystem** that serves as the base for the publication. It can, at any time, take a snapshot of the ecosystem and organize it into a paper publication, ready for print. Thus, in each moment, the book version of the cross-medial publication can be printed to reflect the state of the ecosystem, a crystallization of the multi-authoral stream of information that makes up the environment and its life after the event.

The pages of the publication include the QRCodes and Fiducial Markers that can be used to access the additional modes of fruition, either using the web platform or through the mobile applications that are part of the CMS, also providing the location-based functionalities.

The REFF book, created by an extensive group of authors (see Annexes B, C and D), was implemented using the CMS, and a small presence wll tell the story behind it and give a chance to visitors to take a look at it. The REFF book will also be the theme of one of the workshops, where the use of the CMS will be also explained.

An audio experience will be usable by visitors: wearing headphones they will hear the voice renderings of the streams presented in the visualization, expressed using three dimensional sound: the spatial position of sounds will be generated as to inform the visitor where, in relation to the project space, the information rendered in voice synthesis was generated; volumes will represent the distance in time, where lower volumes will be used for information from the remote past and higher volumes will be used for more recent ones.
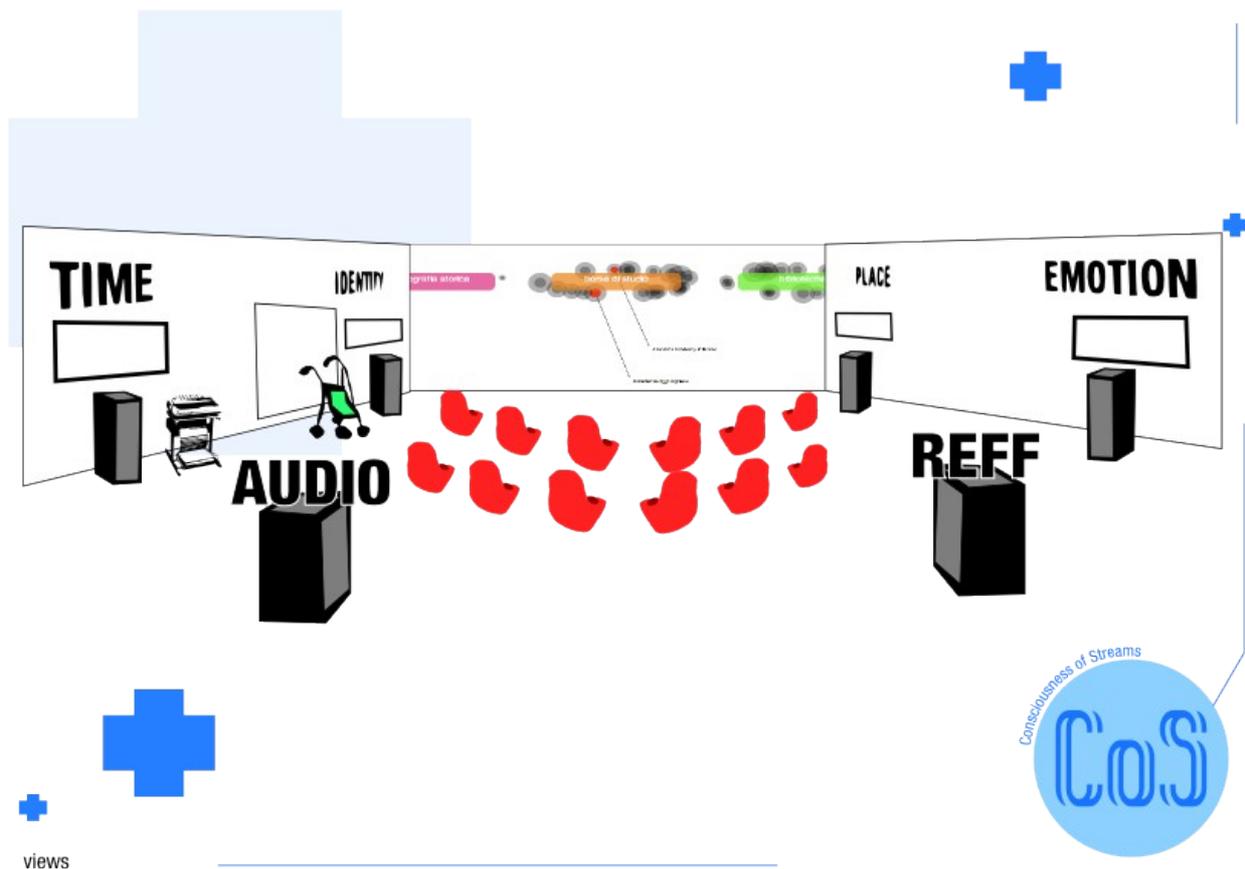
The Perspectives

Identity
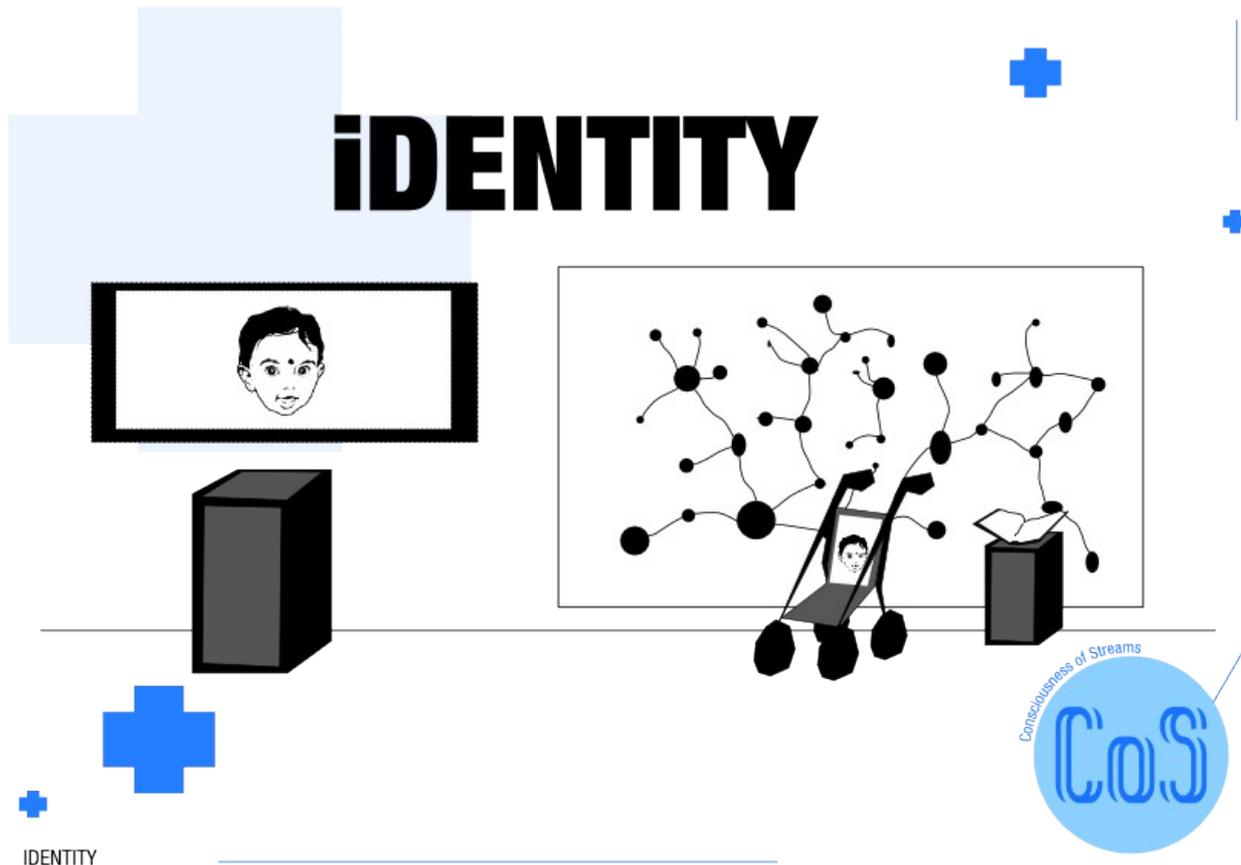
IDENTITY

The IDENTITY perspective observes the ways in which our identities mutate in the stream of networked tecno-communication. Connective mindscapes form by continuously exposing ourselves to multiform information, across text, hypertext, images, sounds, coming from multitudes of sources, simultaneously, in complex patterns.

We are multiple in our multiple presences and expressions, remixing ourselves with contents, platforms and through relations and interactions.

Angel_F is one of such morphed identities. An artificial intelligence, born by the digitally sensual interactions between prof. Derrick de Kerckhove and the Biodoll, it evolved from spyware to digital construct but mantained its essence: to get in contact with as much information and relationships as possible, to dinamically form an emergent personality, and its continuous stream of expressiveness.

Privacy, anonimity, identity/multiplicity, intellectual property, sexuality, knowledge sharing, open source models, digital anthropology and cultures are only some of the domains challenged by a form of life such as Angel_F.

The IDENTITY perspective allows visitors to become active parts in joining the continuous forming of Angel_F's multi-identity.

A screen and a controller (mouse or trackball) allow people to interact with Angel_F's evolving digital mind, across videos, sounds, texts and hypertexts: all the information gathered throughout the years will be surfable and observable, traversing the relationships, taxonimies and information domains automatically forming in Angel_F's mind by getting in touch with people on the web and in the physical world.

By using the interface people will be able to directly contribute to Angel_F's connective and relational mind: select a node, stand in front of the camera and say/gesture/move/play sound/play video/do something, and it will be connected to the existing digital synapses.

Beside the interactive spot, Angel_F's mindmap decorates the wall and, in front of it, Angel_F is present in the babystroller used so many times in performances and activist actions all over the world. The babystroller is interactive as well: Angel_F records all interesting things it sees/hears and uses it to further populate and shape its mind.

A photobook beside the baby stroller can be read to learn about Angel_F's story.

People can ask to take the baby stroller for a ride around the event's location, as to try out what novel interactions can be experienced by walking around with a digital child, a multividual, atypical, non-biological, contemporary, extended family.

Time
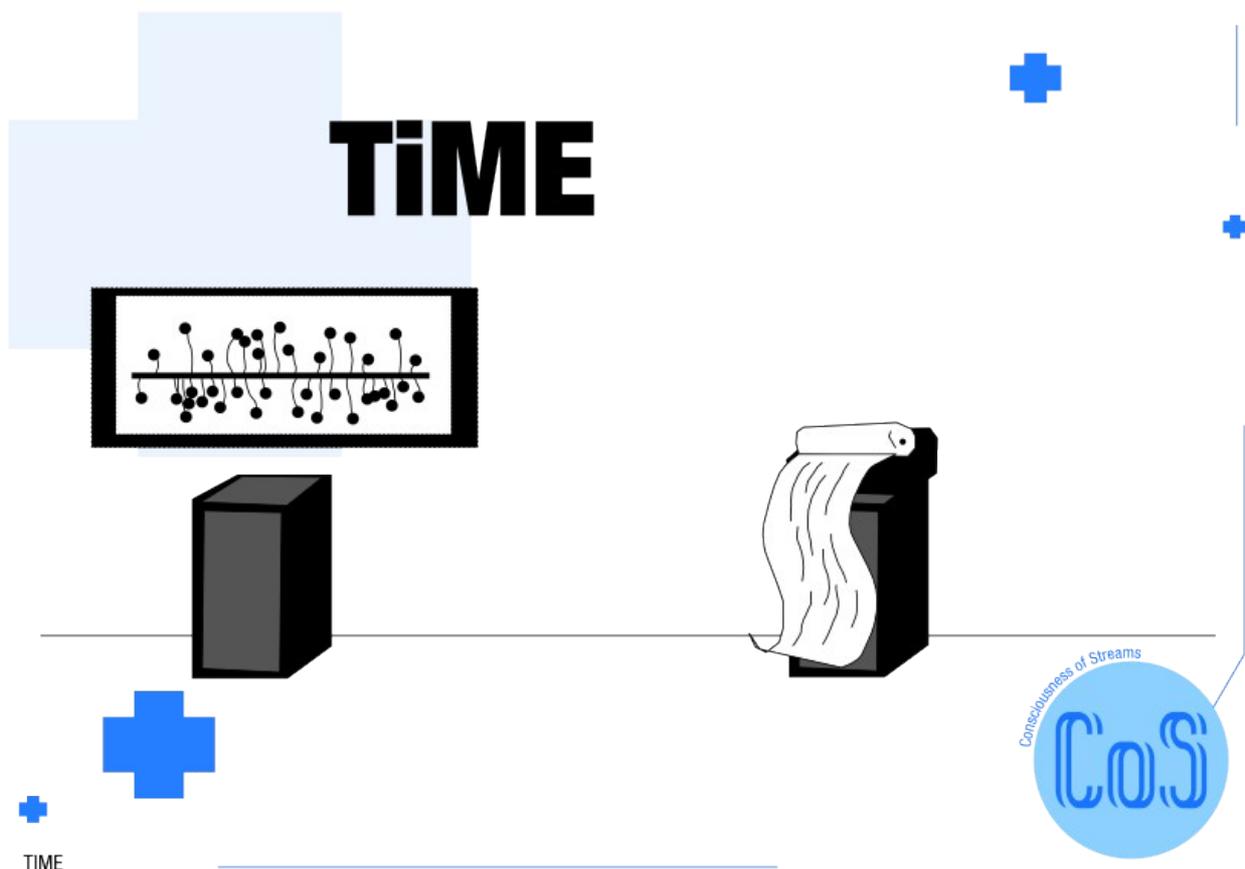
In COS time completely changes its structure. Non-linear, looping, recurring, quantistic, proteic, multidirectional. Focus is shifted decisely towards the present and the near past. What lies farher behind in the past disappears into the fog of a distance-based cognitive algorithm. Information assembles, aggregates, recombines and morphs in agglomerations around the *t0* that represents our present.

The TIME perspective in COS expresses this condition, implementing interactions and experiences that place the individual on his/her *t0* and enables to browse the human universe from there, and to contribute to it. Each point of view is a different universe and each of them coexist, along timelines that are not straight, not linear, not separated, not definitive, not eternal.

The visitor stands in front of the interface and uses it to browse the timeline that can be seen from the current

time (*t0*). At each step in time the timeline changes, incorporating all the information coming from social networks and the contributions of the visitors.

The visitors can, in fact, use the interface to add information to the present *t0*: choose tags, sentences, links and multimedia items and insert new related content using their presence, speaking and gesturing in front of the webcam. The content produced in this way is placed on the current *t0*, and interacts with the other ones coming from previous visitiors and from social networks to reshape the timeline once again.

The nonlinear series of these evolutions can be freely navigated, as well.

A printer with a continuous piece of paper activates itself each hour to printout the current timelines, producing a possibly infinite story of the unstable multi-time in which we navigate.

Place
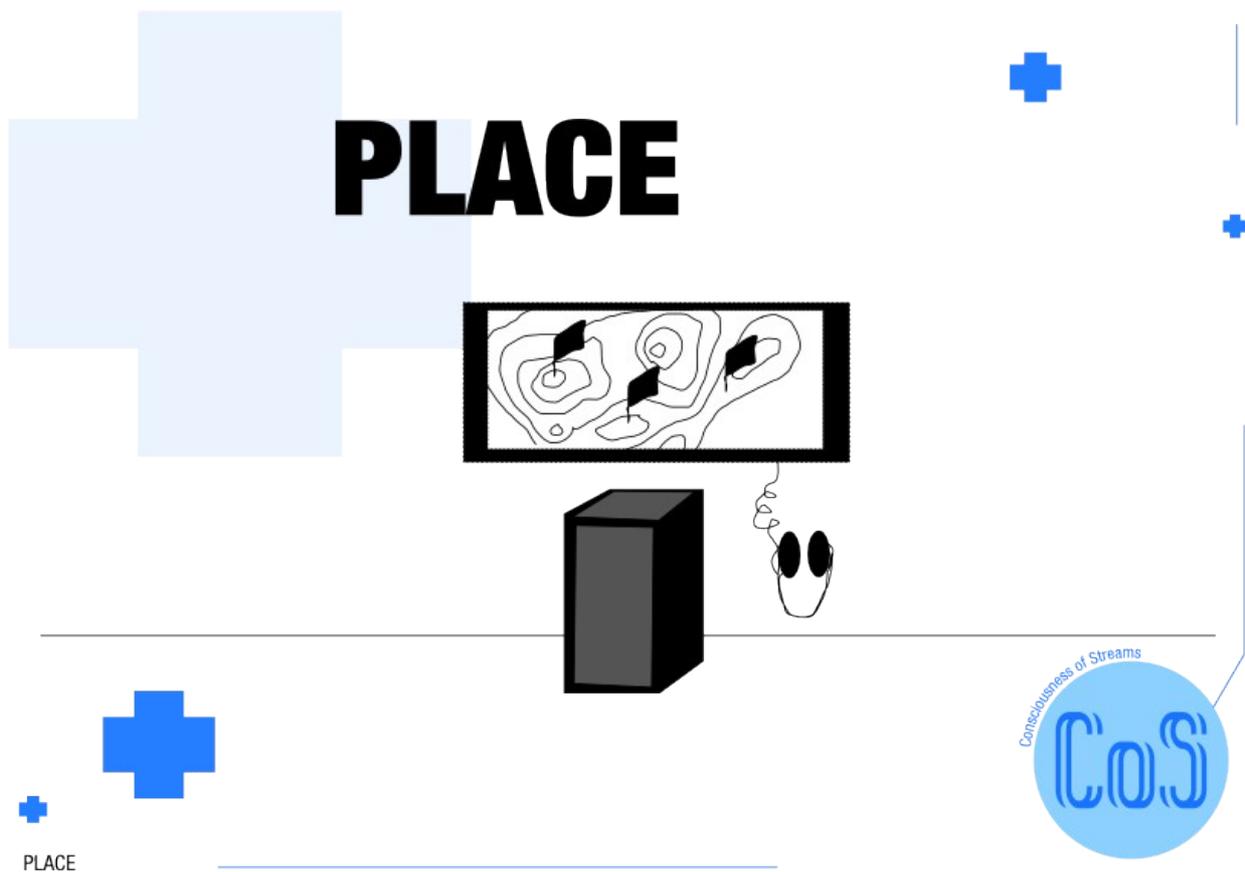
Space is hyperlinked. Location based technologies, ubiquitous computing, natural interfaces, interactive architectures, spimes, mobile technologies. Every one of them creates additional, interconnected layers on the ordinary physical reality, completely changing it.

Just as wormholes disseminated throughout the physical space, digital content and technologies interconnect remote spaces and individuals, objects and information, buildings and emotions.

Architecture becomes ArchiteXture, a location becomes a webpage, an object turns into a database, an avenue transforms into a tool for global meeting and dialogue.

The layering of content over locations creates entirely new sensorial domains. Being able to reproducibly browse the world, object by object, street by street, tree by tree and to know information "where" it is, directly from the various things that populate the places on earth, becomes a cognitive domain that is entirely new and that extends the ideas of psychogeography by several orders of magnitude.

The COS TIME perspective places the visitor in contact with this scenario.

The interface allows you to browse the earth, starting from the location of the event.

Wearing headphones not only enables the visitor to listening to the sounds of the millions of multimedia objects that are disseminated globally on social networks and associated to specific locations on earth, it also allows to listening to the recordings of the sounds coming from the various places in the world (a market in Marrakesh? The sound of the Tokyo Airport? The noise of one of the elevators of the World Trade Center just before 9-11?) and to have binaural clues as to where information is, with synthesized voices and generative sounds guiding the visitor along global geography.

Visitors can contribute to this global location/time-based discourse by using the interface to place contents on locations in the world: their voice and face, a short dance, or whatever they wish.

As all the other interfaces in COS, this interface is connected to the MACME CMS and it can be used and populated by using the visitor's mobile phone from any spot in the world. (see the workshop).

Emotion

In the digital age emotional states, behaviour, body perception, cognition, awareness and arousal mutate, augmented through the interactions with those devices and processes that refer to our attention, perception, experience, knowledge; with those devices that accompany us in our pockets, cars, homes, offices and places for shopping and entertainment; with the visual elements that traverse our field of view; with those architectures that establish doubt and relationships; with the new skin of the world, potentially and completely transforming into a neverending series of displays through which information and relation emerge.

Several attempts have been done over time to capture and represent emotions in the digital age using expert systems analyzing the web's continuous life, electronic circuits observing body conditions, architectures connected to information sources, information visualizations generated from the processing of enormous amounts of texts.

The EMOTION perspective of COS allows people to interact with the creation of one of these systems.

In the perspective, Emotions are represented through several elements: body arousal, textual classification, sensorial pattern analisys, activity based analisys.

Choose a part of your body on the interface and express how aroused, sensible, tired, hurting it is. Write down words expressing your emotional state. Draw directions coming out of your bodies along which you feel energy flows. Interconnect elements, videos, images, words and sounds to describe how you feel.

Each of these interactions is used to create anonymous emotional profiles. These are used in an expert system to describe the emotional conditions of the visitors of the event. Similar processes are also enacted in realtime to internet users, both explicitly or by observing and processing online data available through social networks, open access APIs, social graph analisys, and the processing of more than 100.000 blogs and websites and of more than 100.000 social network profiles.

Using the same interface visitors will be able to browse the information created through this process: observe the emotional state of the whole internet population, of the event's visitors, of specific geographic regions, of specific moments in time.

Workshops: the COS Lab

The workshops are focused on the themes presented in the COS environment. Each workshop has theoretical and practical components, and even many chances for participated performance and action.

All the contents generated in the workshops (the recordings of the workshops, the documentation and materials used, the recordings of activities and performances, the content produced through discussion...) will all be inserted into the CMS and, thus, into the visualization and cross-medial publication, under the form of video/audio recordings, GPS trackings, images, sounds, documents, pieces of software, discussions...

The workshops space will be recombinable according to the necessities of single activities. Usually conformed as a lounging space, with comfortable beanbags for sitting and chatting, it will have surfaces on which to work on during the practical parts. The video projection and audio system used for the COS general info-visualization will be recontextualizable for the workshop's presentations and technical requirements.

Angel_F

This is a disseminated performative workshop. The organizers and visitors can go around the event's location or also around the city of Berlin with Angel_F.

Using the baby stroller they will become a mobile synapse of the mind of our digital baby: drawing spatial paths with their movements, experiencing what it is like to be part of a contemporary, non biological, atypical family, beyond classical defintions of sex, age, relationship, structure, habits and tradition.

The baby stroller will record automatically the paths followed by people accompanying little Angel_F in the physical world, and the discourses and images which its algorithms find particularly interesting.

Angel_F identifies sometimes interesting people during its journeys in physical realities on the baby stroller, and asks them questions, whose responses are recorded, as well.

Each of these informations will become part of the COS information visualization and, thus, of the cross-medial publication.

A presentation will be given about the Angel_F project during the event, also explaining the dynamics of the baby stroller interactions, then the performative/active session of the workshop will start.

Identity

This workshop is focused on multiple identities, on those forms of life that remix, mash-up, involve, recontextualize or reenact multiple identities or that aggregate multiple individuals around a single exposed identity. Luther Blisset, Karen Elliot, San Precario, Serpica Naro, Anna Adamolo, Fosco Lotiti Celant and many more will be analyzed throughout time, space and critical practices.

DIY: description and installation of te Angel_F firefox extension, anonimously using users' browsing information to feed Angel_F's connective mind.

Time

How do you build a timeline?

This workshop will enact an intense practical session intended for advanced users who enjoy the issues of data scraping on social networks, of data mining and analisys, of information architecture, visualization and aesthetics.

In the workshop we will analyze the issues of data collection, analisys and representation from social networks: how do you build a timeline of the thoughts, ideas, emotions, activities, movements and relations of a person or group of persons on the social web?

All the steps will described and executed, generating a complete end-to-end system that will be part of the

COS environment and of the cross-medial publication.

Place

Mapping and augmented reality. We will contribute to the COS stream of information by spatially invading Berlin's geography. The workshop will begin by explaining the platforms and technologies used in the action that will follow.

Workshop attendees will be invited to join us on a tour around Berlin to populate it with layers of information, narratives and aesthetics using QRCode stickers, GPS coordinates, fiducial markers and augmented reality.

All the content produced and placed will be part of the cross-medial publication and will be part of the visualizations in the COS space.

Emotion

The workshop will introduce the concept of "Wearing Emotions", presented in 2010 by FakePress at international conferences worldwide and included in several scientific publications: ethnographic research applied to interaction design and DIY technologies to produce wearable devices able to connect to the emotional conditions of individuals or groups, present or remote, and to visualize them on the body of the wearer, turning it into an emotional display and feedback publication system.

The workshop will continue with a practical session in which we will build the "Conference Biofeedback" device.

REFF

The REFF book (Annexes B, C and D) has been created using the cross-medial CMS used for the COS environment: MACME (Annex A). The CMS is released as an OpenSource software usable to create cross-medial publications that interweave print, QRCodes, Fiducial Markers, Augmented Reality, Social Media, realtime interactions, ubiquitous computing, sensors, information visualization, location-based technologies and natural interactions into seamless experiences that can be lived online, on paper, on mobile phones, from objects or traversing places and architectures.

The REFF book will be presented, together with the story of the activist/artistic action that brought to its creation.

The MACME CMS will be presented and its use described.