

FORCES

COMPLEXITY

Today's interplay of society, culture and its technology confronts academia with fast evolving problem-networks which are extremely complex and interdisciplinary by nature. Traditional teaching approaches based on paradigmatic stability and hierarchies of discipline and bureaucracy can not answer these demands on their own.

ETH World: adaptive systems and emergent structures

TECHNOLOGY

The application of new technology often induces countercurrents which tend to preserve and ritualize outdated behaviours rather than transforming them. Compared to a competitive market of creativity, such modes of action represent missed learning opportunities.

ETH World: allows continuous development from the bottom up

FRAGMENTATION

The manual organisation of ever growing amounts of statically referenced data across teaching, research, industry and society is unrealistic and not desirable. Relationships between information pieces change over time. Even if it were feasible curatorial control may threaten diversity.

ETH World: integration of diverse knowledge with a dynamic academic apparatus

CREATIVITY

Academic output often provides little insight into its synthesis or the social network of the involved individuals. Since meaning is the product of dialogue, ignoring this information inhibits the interested reader from gaining a deeper understanding of the work and often prevents the possibility of continued dialogue and surprise.

ETH World: encouragement of dialogue across interdisciplinary social networks and altruistic collaboration fosters creativity

VISIONS

PEOPLE

The vision of the ETH World is that of a lively growing, mutating and intelligent body that gains its charismatic global profile through outstanding competitive and interdisciplinary performance of the small entities it is composed of. Thus the concept focuses on people with their manifold attitudes towards acquiring and communicating knowledge as key generative factors for fresh ideas.

COMMUNITY

Individuals create, carry and promote knowledge. ETH World will not only become their communication environment, but will propagate the development of new interfacing means between individuals, research groups, institutes, companies and other parties. The paradigmatic shift from information exchange to collective intelligence takes place.

PERSONAL ENVELOPES

Parallel to their physical activity all members operate in a virtual Envelope. Rather than attempting to replace human intelligence through agents, the idea of such personal Envelopes is to extend our first reality in an immersive way. Individual desires of privacy and control are as crucial to the elaboration of the project as are elements of accident and surprise.

LOCATION ENVELOPES

Location Envelopes anchor ETH World to specific physical locations thereby generating portals as landmarks of the virtual environment. The main building acts as a switchboard between various communication processes. These portals provide a immediate overview of the ETH World organism and associated Envelopes are able to track, abstract and promote data in most tangible ways.

MINDSCAPES

Envelopes are visually loaded, manipulated and accessed through individual or collective Mindscapes. They do not just display and structure the information itself but are able to develop associative relationships from emerging patterns. Such Mindscapes allow socially based browsing to become a new mode of creativity in learning, teaching, research and administration, including chance interactions and events. The Mindscapes allow one to drift through associative datascares as through an exciting multidimensional game.

IMPLEMENTATION

FAST START The base concept allows for implementation within a year by depending only on a first set of simple algorithmic building blocks (semi-intelligent software for personal and location Envelopes) with a limited number of basic polymorphic interfaces and a sophisticated generic data structure. The power of this approach lies in the dynamic recombinability of distributed pluggable blocks that can combine and mutate themselves into various kinds of Envelopes. The choice of the devices to be integrated into the system will be completely market driven.

PERSONAL ENVELOPE Personal Envelopes are the core element of the project. They consist of one or more Mindscapes that are created by either student, faculty, staff members and alumni or by other individuals associated with ETH World. Mindscapes can be rearranged, restructured, merged and split depending on individual preferences and needs. They are a means to inhabit and reflect upon individual virtual associative spaces (memory). You can load a Mindscape by simply dragging all kinds of data into it with the help of widely-used communication devices. Once dropped the data is abstracted into a generic structure by using semi-intelligent filters. This procedure allows for associative comparisons with any future and past generation of similar generic data structures. Data evaluation is available on multiple platforms. A dialogue with ones own Mindscape or those of others can be initiated on palmtops, cellular phones, gaming environments or regular personal computers. Mindscapes are not merely a collection of data, but an assembly of information which dynamically reorganises itself and interacts with its surroundings.

CONTEXT ENVELOPE Event spaces such as lecture halls are embraced by Context Envelopes which embed the running events in an associative knowledge context. Semi-intelligent autonomous software dedicated to the Context Envelopes incorporate discussed topics and match them with related contents of ETH World. Students as well as teachers can spend time before and after a lecture, deepening their interdisciplinary understanding of the subject and encouraging conversation among bystanders. Contextual access points to information can be stored in individual Mindscapes for later retrieval and assure easy access to the same thematic area. In order to inform the authors of the sampled data packages about potential forums and interest groups the Context Envelope appends information to the data itself. All information is seen as being contextual and changes when accessed.

SOCIAL ENVELOPES Public facilities, where students and staff spend breaks and transit time, such as cafeterias or the shuttle buses connecting the campuses, may be turned into ETH World Social Envelopes. These spaces are equipped with tracking engines able to access the public Mindscapes of the currently Enveloped persons and mutate the environment accordingly. Pattern matches indicating a high potential for creative dialogue between individuals and/or groups are brought into focus. The picture can vary between a large organic body, incorporating many individual maps (great interrelation factor) to a completely dispersed pattern of loose particles (no interrelation). A direct connection between people and information is not provided, individuals interested in any Mindscape or its keeper can store the access point and optionally initiate (initially anonymous) communication through regular channels. The aim of such a space is to actively encourage the interest of people in each other and their work and to trigger personal relationships across interdisciplinary boundaries.

PR ENVELOPES Symbolically connotated and functional spaces, where the ETH gets in touch with a wider public, may be equipped with interfaces communicating different aspects of its dynamically developing social knowledge body in real time. This generates a completely new and unique corporate identity. One of an adaptive, transparent and organic institution. An institution whose success is based on individuals engaged in dynamic processes of intellectual interaction sharing knowledge and ideas with their colleagues and their environment at large.

OUTLOOK

ETH AS INITIATOR It is our contention that the ETH World is a complex project. We therefore strongly believe that ETH World needs an enthusiastic community not only to sustain itself, but also to produce the building blocks of the project. A minimal set of seductive components are proposed in order to motivate users, institutional collaborators as well as corporate partners to comfortably partake in weaving a network of developing ideas, fundamental knowledge and unfolding dialogue.