map_I.T.

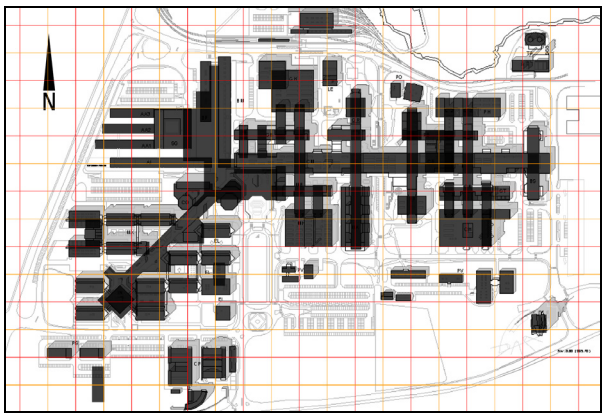
2003

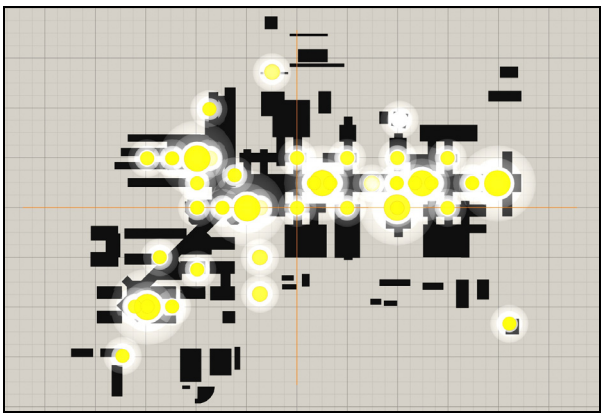
Project by fabric | ch

Client: Swiss Federal Institute of Technology, EPFL (Lausanne, CH)

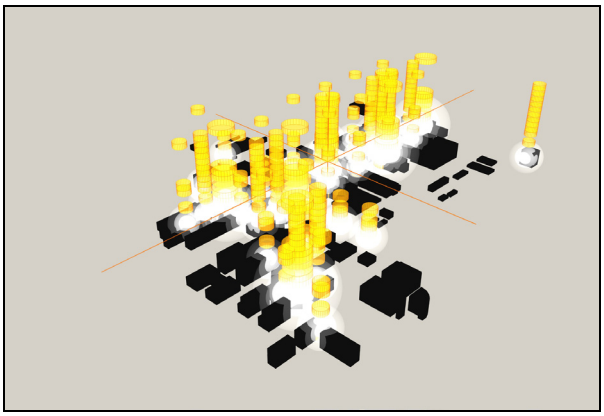
Locations: Ecublens (CH), Internet

- Master plan / Digital urbanism EPFL's information campus
- Physical, digital & distributed architecture: spatial interbreeding
- Data & information spaces
- Mapping of processes in between heterogonous dimensions





[Img. 1, 2]



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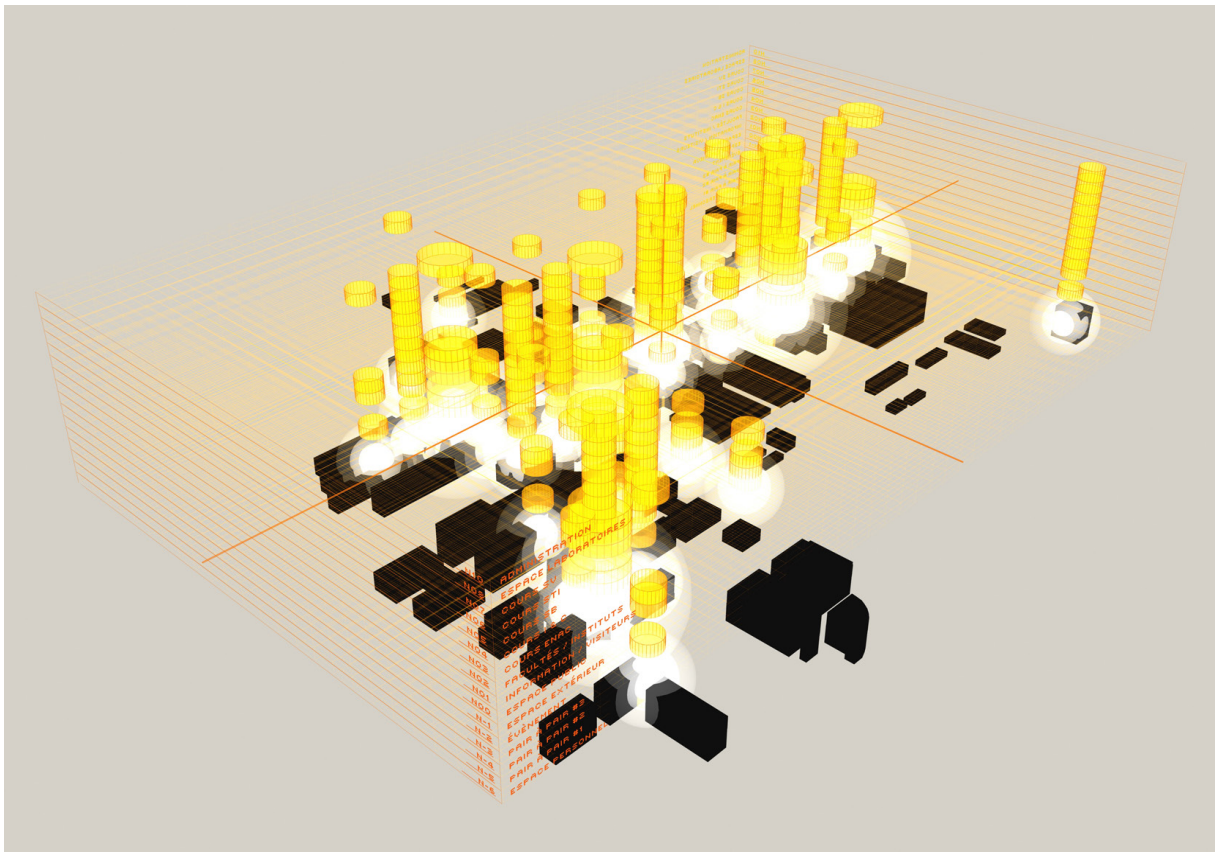

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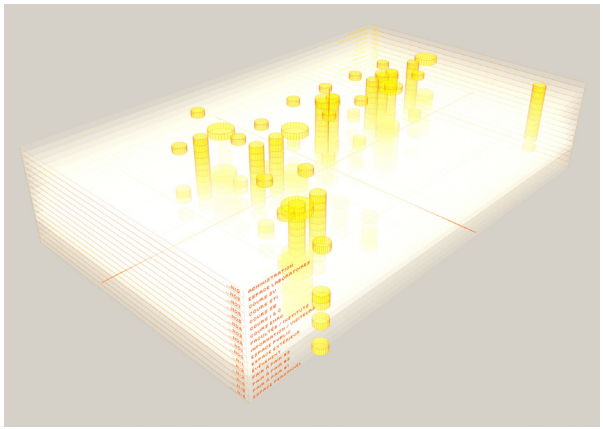

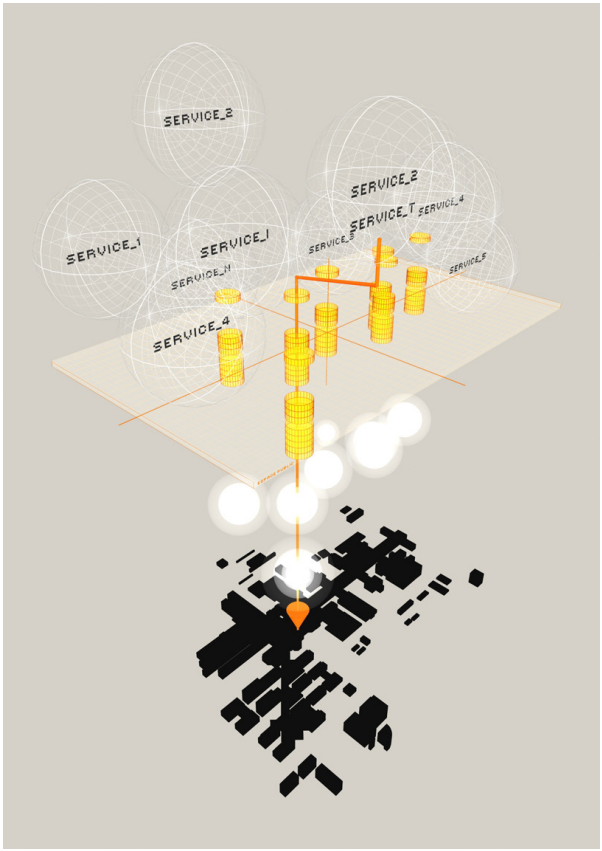

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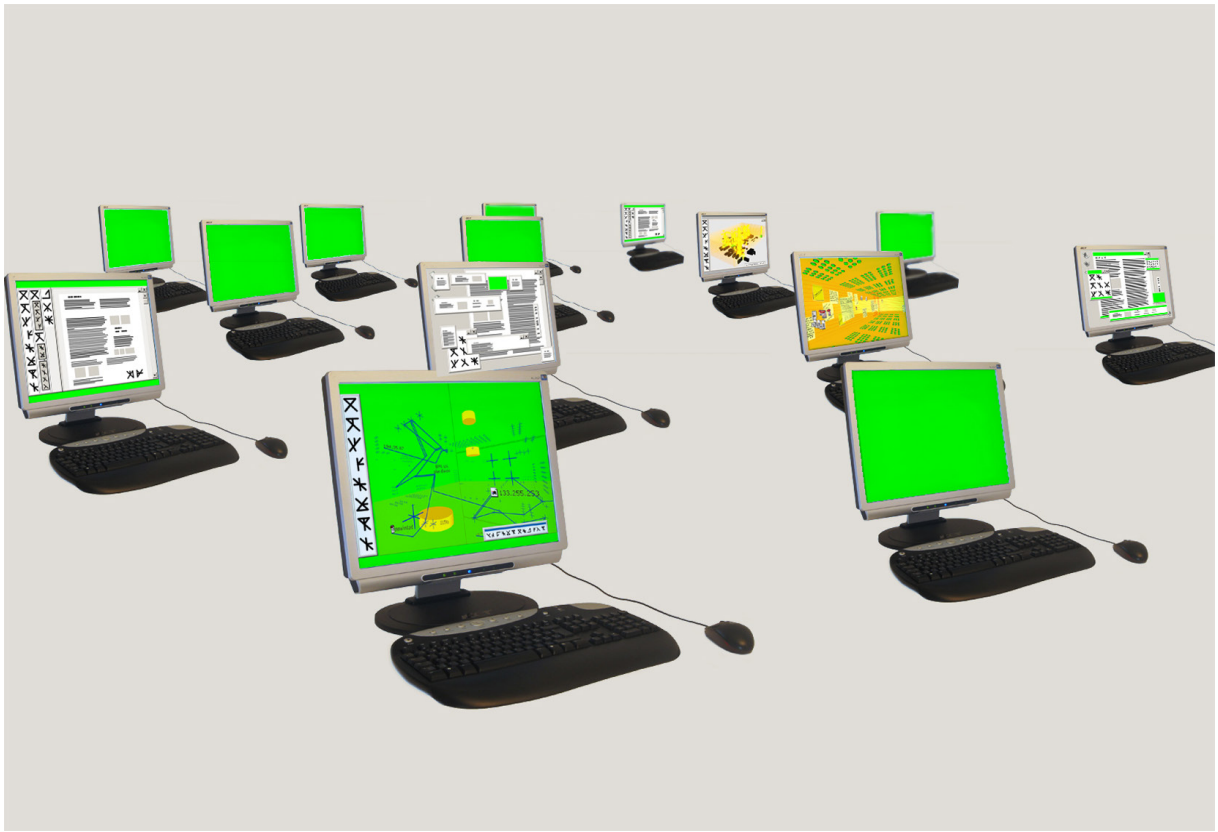
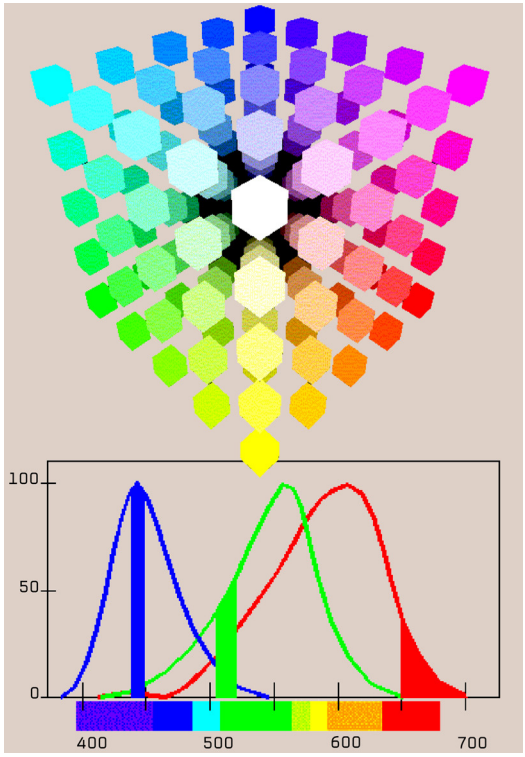


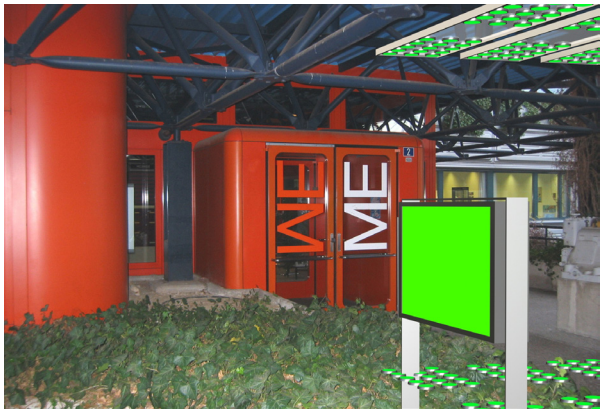
[Img. 8]

[Img. 9]

[Img. 10]



[Img. 11, 12]



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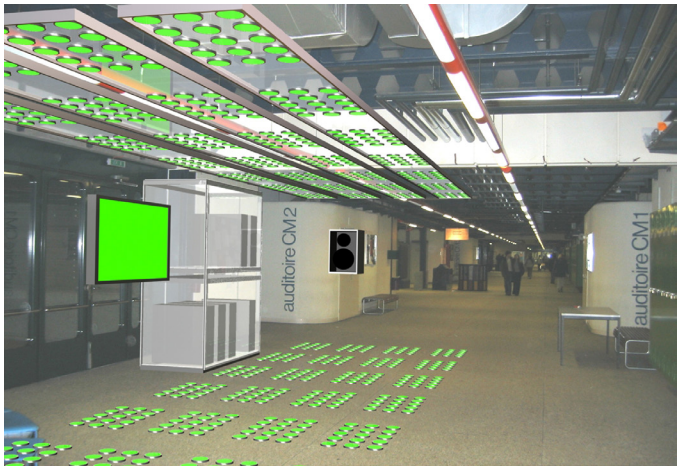
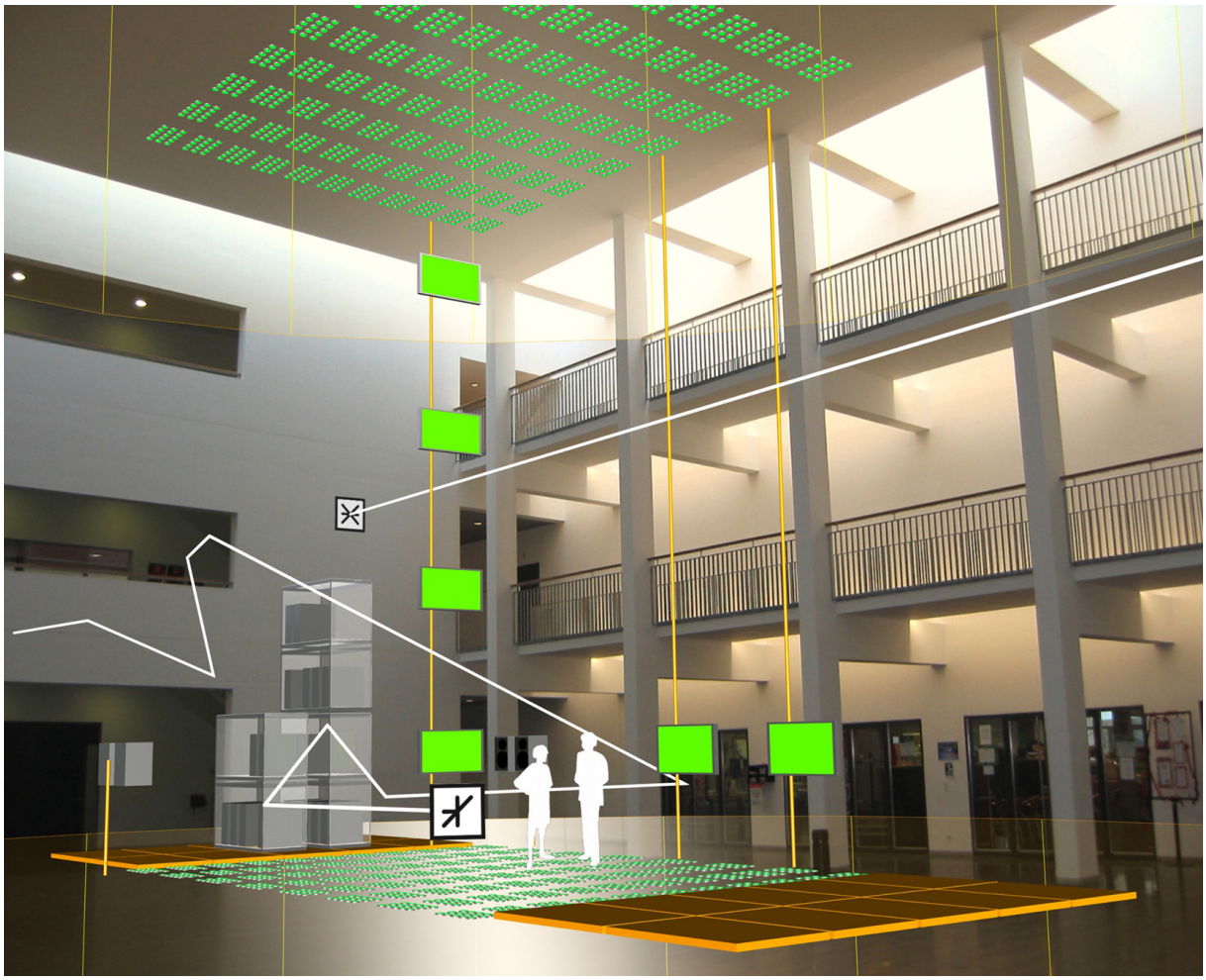


[Img. 15, 16]

[Img. 17]



[Img. 18]

Image captions:

[Img. 1] EPFL general map, existing physical state (2002).

[Img. 2] map_I.T, EPFL map of waves used in the project: localized wi-fi access points and electromagnetic fields.

[Img. 3] map_I.T., EPFL map of waves, section with 16 levels of information.

[Img. 4] map_I.T., axonometric view of the N levels of services (yellow cylinders) linked to the localized wi-fi access points (white spheres). The access level (0-N) is customized by users according to their needs, envies, and so forth. There are N service zones by wi-fi access points.

[Img. 5] The creation of a volume of data, cut out of N levels of N types of data (each level contains the associated data: administration, laboratories, courses, faculties/institutes, information/visitor spaces, public spaces, external spaces, peer- to-peer spaces, performances spaces, and so on). The whole of the data created or shared on the campus is indexed automatically (or according to parameters preset by each user) inside this volume of data (datascape). The volume of data (datascape) is related morphologically to the buildings and waves maps of EPFL as well as to the different localized wi-fi access points; thus, it generates an index (by default) of physical and geographical data.

[Img. 6] Visualization of the datascape and the N levels. The contents of the datascape are accessible either by the localized wi-fi access points (access to contents and services related to these localizations) or in a distributed way (traditional network access). It is always possible to reconfigure the whole content related to the localized access points (kind of a content elevator). All the levels are shared between the connected users (multi-users and communities of knowledge).

[Img. 7] Principle of mapping between data and physical space, datascape and EPFL map: association of a selection of functionalities with a zone of service (orange cylinder) on level N. To this specific level corresponds specific data (a data layer of the datascape) and to this zone of service corresponds an emission-reception point of waves (localized wi-fi access point, white sphere) on the campus. These elements constitute the principle of interfacing, indexing and geolocalizing data.

[Img. 8] Variation in interfaces to access the datascape (2D, 3D and 4D), avatar logotypes, traces and screensavers diffusing the "dataclimate" (see below). The elements composing the interfaces are the documents, the datascape, the connected avatar logotypes (or working groups), the geolocalization of the computer (and/or of the user if he is in a phase of "mobility").

[Img. 9] Example of a 3D interface connected to the datascape. The possibility exists to seek, to see and/or to follow the tracks left in the files by other users. Knowledge transfer and creation of knowledge community.

[Img. 10] Another interface presenting 2D access to map_I.T. content with logotypes-avatars corresponding to specific work groups. A mobile device diffusing the "data climate."

[Img. 11] The "data climate" is always present on the campus (screensavers, wi-fi access points, and so on). It provides the activity rate inside map_I.T. in real time.

[Img. 12] "Data climate" screensavers on PDA, mobile phone and workstation display.

[Img. 13] Materialization of a wi-fi access point in a public space - data climate.

[Img. 14] Permanent presence in a classroom and access point.

[Img. 15 S(t)imulated volume and window, data climate at the localized wi-fi access point. The possibility exists to enhance the activity of static public spaces with digital content.

[Img. 16] Laboratory access door – minimal presence of map_I.T.

[Img. 17] Rest zone - exclusion of electromagnetic waves.

[Img. 18] Wi-fi access point, with hybrid visualization of map_I.T.: users, avatars-logotypes, data tracking, data climate and s(t)imulated spaces.

Txt

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map_I.T.

map_I.T. is a master plan for the digital campus of the Swiss Federal Institute of Technology (EPFL). It is both a prototype and a manifesto for a new form of architecture binding knowledge and information sciences to those of territory and space: electronic architecture, prospective architecture, or architecture for a transformed contemporary territory. It is both a reflection and a proposal to "in-form" a new "situation."

Why answer this question by using space, while it mainly and originally addresses information and communication systems? Precisely because they transform space and they are, basically, a matter of space. Recent technological developments have transformed the perception of space, certainly more so than in the last twenty years of architectural practice.

The essential discoveries of Alan Turing, Claude Shannon and Norbert Wiener and their successors upset more of our practices, our way of communicating, of thinking, of moving, of living and thus of inhabiting, than many projects in contemporary architecture, which, in terms of the majority, continue to build modern or post-modern spaces. Thus, by their impact on our perception of space, these technologies of information and communication require a response by space, for space and engaging in the practice of the architect to evolve.

It is particularly the case in a project like map_I.T. where the request itself is "already" a question of space (to design a campus, an architecture of knowledge).

But we should not mislead: "this will NOT kill that." Our statement is not to predict again the death of "physical" architecture, just as paper death was announced a few years ago since it was to be supplanted by digital media, or a century earlier, as Victor Hugo argued in "Notre-Dame de Paris": printed books would kill the memorial dimension of architecture... On the contrary, our intention is to expose architecture to new questions, while seeking to reposition the practice of the architect inside contemporary space.

More than new technologies, what interests us here is the true concept of information. Information considered as a raw material intended to be transformed into meaning, into knowledge by an act of architecture. This statement allows us to reconsider the making of space in a radically transformed way: through "information," in a "soft" way (bits of information, signs, and their diffusion) rather than in a "hard" way (megajoules of industry and its infrastructures). It is thus necessary to find new associations of competence and of people and other ways of acting in/on space, through its new materialities: to consider "information" as a matter. Therefore, to perform (architecture of) information becomes an act of informing the matter, giving form to an object.

Thus, this (architecture of) information has the "ability of organization" or "creative action": a poiesis of information, which opens another way of transforming space: "soft." An architecture, a "work," on space by bits of information or generative spatialities and functionalities rather than by walls.

This concept of "soft" space or "soft" architecture includes also the functionalities and space hybridizations induced by the "multi-functional/-fictional" technological devices, mobile or not, that have appeared since the Fifties: the antique Walkman (perhaps the first technological device used to "take along" a private and configurable "space functionality" in the public sphere); television, which brings the "spectacle of the world" inside the home and which has strongly contributed to restructuring interior spaces; and mobile phones, which transport a private environment into the public space or vice versa. Some of these devices, such as mobile telecommunication systems or the Internet, even generate a new relation between subjects and objects. Michel Serres calls them "world-objects." They are humanly fabricated "objects," devices or systems whose scale reaches the dimensions of an entire world, creations of ours that finally exceed us, such that rather than defining and controlling them, we live and move within them and find ourselves shaped by them: we dwell in them as in a "world."

This new "situation" creates micro- and/or macro-spaces, local and/or global functionalities, which make it possible to transform or personalize the status of a space created and defined initially in a specific place by (hard) techniques. These technologies thus modify the nature of these "modern" or "post-modern" spatialities. Moreover, some of them (radio, wireless communication systems, and so forth) question even the nature of spatiality as defined by walls and floors since the waves cross these physical "boundaries" without any difficulties and might redefine (functionalities of) space when they are used.

The choice to build the "modern" space (associated with the "techniques," as Michel Serres points out) or to build the "contemporary" space (associated with the "technologies"), as we plan to, is not without consequences and can be perceived of I n the manner of a theoretical position: we pass from "hard" to "soft" and from "slow" to "quick," we evolve/move from a space defined by the border and the limit, from a space based on dichotomy (inside vs. outside, public vs. private, and so on), to a potential and evolutionary space, marked by the obliteration of the physical limit (the wall, the partition, separation, and so on) and the development of intensities (electromagnetic points of emission, densities of information, variations, and so forth).

We thus change the model and scale of space values: we pass, indeed, from a single space (single localization in time and space) to a ubiquitous and potential space, quickly evolutionary (multiple localizations, variable states and configurations in time and space, multiple and dynamic signs). And this is because we are completely changing the nature of matter and replacing the walls with data, and then we hybridize the physical, the sensitive, with the immaterial and the invisible. We multiply the fictions on space or, quite simply, we multiply space to lead to a new metaphysics of the place: a place of information intended to become a place of knowledge.

As an architecture of information, map_I.T. seeks to place knowledge directly in the air, "to enrich air by knowledge" (as a fire enriches air by light and heat), to transform it as a "sensitive" interface, and then to use the body and its displacements as a means of interaction. map_I.T. proposes to act on various levels while inserting a new layer between the physical architecture and its inhabitants with their mobile devices. This mediating, relational, evolutionary and dynamic layer constitutes the map_I.T project.

It proposes:

_ To question both the territory (multiplication of spaces) and the architectural functions (flexibility and customization of the functionalities using information technologies) of the campus.

_ To renew the image of the institution by introducing a visual environment strongly evolutionary while being closely related to the activities of the people on the campus: the visual environment delivers information.

_ To offer the possibility to everyone (equipped with adequate electronic devices) to "customize" functionalities of the space.

map_I.T. is thus a project of architecture which aims to insert the territories of information on the campus of EPFL, to open and extend this campus towards its outside. From its specific materiality, map_I.T. makes it possible to develop an architecture of multiplication and interbreeding (spaces, functions): for a single place (time and space), multiple states and spatialities. This architecture relies on generative spaces, on data and information as matter which develops a low physical materiality. map_I.T. proposes concepts. Each concept should then be studied, developed further. It is a master plan and must be read as such.

fabric | ch, November 2003

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