Idensity®: a communicational paradigm in urbanism

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The presentation focuses on the changes of public urban space due to medialization and develops scenarios for an interplay of the public urban space and the public media domain.

This is illustrated by the project “Public Media Urban Interfaces”, publicly accessible interfaces between the global media space and the local urban place. This project proposes an alternative scenario for the interplay of mass media in order to reinforce the function of public urban space. It develops a hybrid urban network-space, a fusion of media space and urban space. It emphasises the role of the public and occupies the vacuum in between the local and the global.

This project should not only be read as a model for space in the information/communication age but also as a “model of reflection and claim” (Constant), as prototypes for an “architecture of connecting/of switching” (Flusser).

This project represents a prototype for a new interdisciplinary field of design and planning (‘Soft Urbanism’), researching the transformations of urban space of the emerging “information/communication age”, exploring the dynamic interaction of urbanism and the space of mass media and communication networks. ‘Soft Urbanism’, dealing with the “soft” aspects of the city, not only intervenes in the realm of infrastructures, but also adopts their concept and paradigm: by supplying networks, ‘Soft Urbanism’ creates new fields of possibilities and frameworks for self-organisational processes.

Today, the communicational paradigm, with its “network-cities” and “nodes”, “terminal architectures” and “urban branding strategies” is infiltrating and transforming the urban discourse and practice. Within this framework, “idensity®” is proposed as a conceptual tool for developing urban space in the information/communication age: “idensity®” is a composite term consisting of the combination/fusion of the word “density” of urban and media communication spaces (density of connections) and of the word “identity”.

Idensity® by incorporating a wide range of future (communication) spaces, offers an integrated model for dealing with hybrid (media and “real”) space in the information/communication age.

This term carries the discussion on the urban from the morphological level of a formal description of the network patterns of the “network city” (“Landscape” versus “City” etc.) to a more integrated structural understanding of the networks of spaces for social communication.

A general introduction is illustrated by projects.
“The new city presupposes that the cables of the interhuman relations are switched reversibly, not in bundles as with television, but in real networks, respons(e)ibly, as in the telephone network. These are technical questions; and they are to be solved by urbanists and architects.”

To reinforce the significance of public space we have to deal with at least two “public”, the global and the local public, by creating spheres where local and global public space can fuse and interchange.

INTRODUCTION / URBAN SCAPES

Public urban space and the space of information networks are usually considered to be competing frameworks of social interaction. In fact, the traditional functions of public urban space are being taken over by telecommunication networks with their input/output devices embedded in private interiors: distribution and discussion of news, display and selling of goods, provision of space for play and celebration were formerly the tasks of public space; today they are increasingly being performed by radio, TV, telephone or Internet.

Architects and urbanists confronted with these developments used to adopt an attitude of blind refusal: the prospects offered by electronic media were ignored or simply denied, because in their view media space seemed to dissolve the “urban public space”. On the other hand, the proponents of cyberspace have been projecting all sorts of simplistic expectations, anticipating the transfer of urban functions in the “soft” cities of tomorrow.

We proposed an alternative scenario for the interplay of mass media in order to reinforce the function of public (urban) space: ‘Public Media Urban Interfaces’ (see below), publicly accessible interfaces between the global media space and the local urban place. This project develops a hybrid urban network-space, a fusion of media space and urban space. It emphasises the role of the public in an increasingly privatised society and occupies the vacuum in between the local and the global. The products of this alliance of urban and media networks are “hybrid” spaces that are at the same time analog and digital, virtual and material, local and global, tactile and abstract.

This project represents a prototype for a new interdisciplinary field of planning and design (‘Soft Urbanism’), researching the transformations of architectural, urban/regional space of the emerging “information/communication age”, exploring the dynamic interaction of urbanism and the space of mass media and communication networks. ‘Soft Urbanism’, dealing with the “soft” aspects of the city, not only intervenes in the realm of infrastructures, but also adopts their concept and paradigm: by supplying networks, ‘Soft Urbanism’ creates new fields of possibilities and frameworks for self-organisational processes.

In the meantime the “network” paradigm, with its “space of flows”, “network-cities” and “nodes” is infiltrating and transforming not just the urban planning theory and practice but the discourse on our social environment in general, Castells, (1996). Within this framework, ‘Idensity®’ is proposed as a conceptual tool for developing urban space in the information/communication age: It is a composite term consisting of the combination/fusion of the word “density” of real urban and “virtual”/media communication spaces (density of connections) and of the word “identity”.
POLITICS OF SPACE / SPACE OF POLITICS

The emerging mass media spaces are increasingly being privatised and becoming more and more exclusory. The media networks are segregative spaces: Internet and digital television exclude those unable to pay for the necessary hard- and software infrastructure and the monthly connection fees, not to mention the access-control mechanisms or the required technical skills. A social gap between these non-tactile exclusory media spheres and the imploding urban sprawls is widening, worldwide.

The segregation processes in media environments are nothing but the enhancement of tendencies manifesting themselves in the “real” space with the creation of the urban ghettos and their counterparts, the (suburban) protected social reservoirs for the upper classes. These access-controlled residential areas can be found today all over the world, in Third World and in western democracies as well as in the east neo-capitalist countries. They range from heavily protected impenetrable fortresses to retirement towns for well-off pensioners or projects like Walt Disney’s Celebration - an entire residential town (not a theme park).

Parallel to this dismemberment of urban structures into disconnected segregated parts, the public space is imploding into privately controlled and commercially exploited interiors such as shopping malls and atriums. And all these developments have their counterparts in cyberspace: here you need a passport to enter protected residential areas or clubs, there you need a password to access communication.

This loss of function of the urban public space due to privatisation is exacerbated by the withdrawal of activities from (semi) public spheres to private interiors: with the help of modern technology, work can be done in the comfort of your private living room (teleworking) and retailing does not depend on your visit and chat with your local grocer (teleshopping). With the rationalisation of these activities, social interaction is being reduced to its functional components.

Traditionally, the distinction between a global and a local public space is considered to be identical to the distinction between media space (which would be global) and “real” space (which would be local). But this concept has been revealed to be too simplistic: in fact, we are experiencing today not only a privatisation but also an atomisation of electronic media on a local scale, with for example the multiplication of local TV-channels or radio stations.

On the other hand, global and local spatial hierarchies intermingle in urban agglomerations. The increase in speed of worldwide information networks and transport systems (digital networks, air transport) creates a distinction between spaces that are local and those that are global (to various degrees). Some urban fragments (banking and trade-fair districts, airport surroundings, etc.) gain qualities of “global” performance and can be seen as part of a “global urban condition”. Thus certain parts of different cities, although spread out around the globe, are closer to each other than to their neighbouring slums (not only because of their similarity, but even in terms of the time necessary to get there).

An attempt to reinforce the significance of public space therefore has to deal with at least two “public”, the global and the local public, by creating spheres where local and global public space can fuse and interchange.
Bridging the gap and connecting the global media spheres (Internet, digital television) with local urban content and place, a hybrid architecture of communication spaces proposes a new, public, combined analog-digital infrastructure: Public Media Urban Interfaces, publicly accessible interfaces between the global media space and the local urban place.

Exploiting the potential of media and fusing the media concepts of the telephone (with its one-to-one communication) and the television (one-to-all broadcasting) makes it possible to create a many-to-many broad- and narrow-casting and -catching system. The local broadcasts can be reinforced to temporarily invade the global media space to a greater or lesser extent, creating a locally-based dynamic media network from the bottom up.

As politics increasingly moves into the space of mass media, a right of direct access (a right to broadcast) could be one of the foreseeable future scenarios, maybe even replacing the right to vote with the right to broadcast.

The agenda has been set for the privatisation of the electronic mass media spaces. While developing this project, however, we believed that “at this turning point, ‘on the threshold of the era of world market domination’ by information/communication giants, there is still a chance to oppose the forces of monopolisation and establish a more public dimension in the communication environments”.

This link between global media space and local place having its interfaces in the public urban space would counteract the development of privatisation in urban as well as in media space. These Public Media Urban Interfaces would make it possible for everyone to broadcast and access and influence the global media environment from the urban local neighbourhood and would plug the body into the “virtual” media worlds.

A demo project on Public Media Urban Interfaces, exploiting London’s urban tensions and structure unfolds strategies and visualises aspects of this investigation. It speculates about processes of urban transformation and economic (empowering) strategies, confronting a working hypothesis with the idiosyncrasies of a specific urban situation.

This project should not only be read as a model for space in the information/communication age but also as a “model of reflection and claim” (Constant), as prototypes for an “architecture of connecting/of switching” (Flusser):

**Media Babies**

A local-based public interface, the Media Baby, the primary unit of Public Media Urban Interfaces, is the instrument that seduces its public into exploiting the television medium, maximising its potential spontaneity by hijacking the publics imagination. The name Media Babies stands for the seeds of communication (environments) as well as for the public neighbourhood feeder houses (hybrid analog-digital environments) from which the Media Babies will be broadcast. One hundred and twenty-eight feeder houses distributed evenly over the sprawling London towns and interconnected by means of an ISDN network supply eight Bridge Clubs located on the Thames with a continuous stream of (non-)events. The Media Baby at your neighbourhood launderette consists of a Catching Gallery, two Intro Booths, a Debutantes’ Booth, a Connector Platform and a Microwave Transmitter. The Catching Gallery is the area where the public can view the narrow/broadcasting activities of eight other Media Babies and one Bridge Club. Interactive technology enables the public to intervene in those narrow/broadcasts but also creates the possibility to establish direct contacts, thus forming endless smaller networks within the larger framework of Public Media Urban Interfaces.
**Bridge Clubs**

The Bridge Club bridges the gap between programs meant for local distribution and those that deserve a larger audience. It forms the core of a North-South line linking eight Media Babies on each side of the river, connecting the north with the south of London. The Bridge Clubs are sophisticated and accelerated versions of the Media Babies providing the space for public events on an urban scale. One of the additional facilities they have is the Selector Platform where the Selection Ritual takes place. Using the larger broadcast facilities available to the club, the selected programs are experienced and transformed to suit a mass audience. The Bridge Club, being a knot in the net of translocalities, also serves the function of bridging programmatic events related to the site where the club is located. For example, the Hungerford Bridge Club on certain days (or nights) functions as a Debutantes’ Ball in relation to the nearby Waterloo Station (Continental connection).

**Replace the right to vote with the right to broadcast**

The publicly distributed ‘Air Time for All’ Smart Card allows you to produce and narrow/broadcast and also gives you the opportunity to adopt a message (not your own) by giving it extra Air Time. At the Media Baby in the neighbourhood, you will find the necessary programming facilities to make your program and the means to monitor it as it goes on the air. You can also accelerate messages (not your own) by giving them extra broadcasting time with the help of the special Smart-Card. And as a message gains strength, its chances of reaching a much larger audience increase, reaching more Media Babies, a Bridge Club, the city or even the whole country, Europe and the rest of the world.

Replacing the right to vote, a right to narrow/broadcast is established. Once you have produced your programme, instant satisfaction is guaranteed. Check out the Connector Platform and see what reactions your program provokes in the network: get a five-dimensional overview of the life cycle, the pains and the joys of your message.

**Mobile Containers**

The Public Media Urban Interfaces and the Bridge Clubs together with a fleet of container-boats, caravans, riksha’s, taxi’s, trucks and limousines (equipped with transmitters/receivers and interactive life jackets) form a transportation/communication infrastructure servicing the users of the network and also commuters, nomads, migrants and tourists. The traditional translocal (mobility/communication) networks are thus knitted to the new glocal media networks (Internet/TV).

These capsules containing (from rudimentary to more sophisticated) media units are mobile nodes in the translocal networked environments, “vessels” within the complex multilayerings of the space of flows. They serve as spaces of exchange (export/import trade), as laboratories of glocal cultural bastardisation. With these containers new hybrid, media and real spaces emerge, that are no longer tied to any one specific location but rather are the result of their interconnection.
In October 1999, a boat spent a week voyaging down the Rhine from Cologne to Rotterdam and Amsterdam as a floating media-laboratory. On board were eighty passengers: artists, musicians, architects, urbanist and media collectives from both North Rhine–Westphalia and the Netherlands. They were all working on projects dealing with the space of flows (the river) and spaces places (along the journey). ReBoot [the name is a play on words, as ‘Boot’ means ‘boat’ in both German and Dutch] was launched by the Academy of Media Arts Cologne and De Balie, Centre for Culture and Politics in Amsterdam, under the aegis of the official cultural exchange and co-operation project of North Rhine-Westphalia and the Netherlands, entitled “kunst NRW.NL”.

On its way down the river, the ReBoot boat docked at various cities along the Rhine (Düsseldorf, Duisburg, Emmerich, Arnheim and Rotterdam) to address local public. In collaboration with local artists, DJs and performers, art projects, concerts, guided tours and lectures took place at these locations. The boat, connected via Internet with a series of spaces along the river (clubs, labs, etc.), was part of a translocal networked environment. During the journey programs were broadcasted live via Internet and on local television.

Reboot was a hybrid (physical and media) vessel, idensifying the translocalities of the journey. From this hybrid (physical and media) mobile container one could simultaneously experience the idensities of the areas one traveled through, the fluid, ever-changing densities in the trans-local networks.

A traditional translocal network (the Rhine) was connected with new “glocal” media networks (Internet/TV).

**Soft Urbanism**

In architecture’s role of defining and materialising the spaces for social interaction, designing the relationship between the physical and digital public domain is becoming more and more of a challenge: investigating the relation and interconnection of the “soft” city with its finite material counterpart, the living environment, speculating about interfaces between the “virtual” and the material (urban) world and designing hybrid (analog-digital) communicational spaces.

Soft Urbanism deals with information/communication processes in public space, the soft aspects overlying the urban sprawl and modifying it: the invisible networks acting as attractors, transforming the traditional urban structure, interweaving, ripping open and cutting through the urban tissue, demanding interfaces.

Soft Urbanism not only intervenes in the realm of infrastructures, but also adopts their concept and follows their paradigm. It brings an inherently flexible approach by expanding the field of possibilities of social interaction and opening new paths of urban development. Soft urbanism conceives the city as an organic entity, as “proteinic chains of networks”. Soft Urbanism is therefore not about shaping, inscribing or determining places, but about creating frameworks which allow and enhance a variety of unpredictable developments.
Present urbanism is caught up in the dilemma of either trying to realise the dream of the omnipotence of planning or accepting being powerless in the face of the forces of the property market: on the one hand the modernist belief in scientific methods of determination and control of the urban phenomena violating entire cities, on the other hand, the neoliberal positions giving in to the interests of privatisation and declaring the dynamics of the market to be the only legitimate determinants of urban developments.

Facing the consequences of both positions today, Soft Urbanism is critical, demanding an alternative strategy: not being able to regain the optimistic view based on infinite growth and the dogmatism based on the confidence in control of the modern movement, Soft Urbanism will not make the missionary promises of salvation of the early avantgardes. But it will nonetheless rethink the strategies of interventions to reintroduce programmatic speculations about the public domain in urbanism.

The interventions will not be about control and determination, but about expanding infrastructures, frameworks for processes of self-organisation. “Soft” strategies will be “bottom-up” strategies: rather than defining first the global result of the interaction and then determining the necessary relation between the elements in order to produce that interaction (which would be a “top-down” approach), simple rules for a set of independent elements will be developed and what emerges from the interaction of these elements is aleatory. According to biological models, these fields of interaction of plural forces could serve as a reservoir for the selection processes needed for the urban transformations.

**Inverting Planning**

The acceleration of technological innovation, abrupt changes within the global economic and political order, individualistic lifestyles and a succession of very different types of accommodation/premises make urban/regional developments highly unpredictable. As the instruments of prognosis are failing us, we need to rethink the possibilities and the mechanisms of urban/regional planning. We have therefore to research and to develop strategies and instruments for processing change, for encouraging, facilitating and connecting the ongoing processes of urban growth and transformation, for supporting the plural forces shaping our environment.

Planning has to invert, to change into the processing of the unplannable. This processing of change is not just the management of ongoing changes, following and reacting to market forces. Planning can develop “market-forcing” strategies, by providing public communication spaces for the processing of the “new”. Public media event spaces and public “hybrid” (media and urban) interfaces are proposed as an infrastructure for urban/regional planning, as communication spaces for urban issues, forums for developing communal visions of our worlds.

With the strengthening of (urban/local) interest groups and the exteriorisation of planning supported by digital techniques such as, for example, “Virtual Reality”, the processing of urban transformations (what we today call “urban/regional planning”) will become more and more a public affair. The processing of urban transformations, the processing of the unplannable, will develop into an increasingly central element of future politics, of the future locally-networked state.

“Hybrid” spaces, focused on the discussion of the future of our environments will function as generators of local identity (and trust). These media spaces, specialised in the communication of local/regional (planning) issues will become increasingly significant. They will support and enhance the regionalisation of politics, a trend that is emerging as a counterbalance to the developments of economic globalisation.
In these “hybrid” spaces targeting urban issues, rational discussion will mix with the seductive elements of pop-culture. This (infotainment) trend is embedded in the general development of politics into a media event and in the merging of political culture with popular culture. The campaigns will be integral parts of the programs of the “hybrid” (media and urban) “economy of events”, of the symbolic economy, this whole industry for the consumption of the “urban theme park” that is emerging, with its city trips and “urban safaris”, “urban images” and “urban brands”.

Urban/regional ‘un-planning’, transformed into an event-communication (space), could develop into a central element of the increasingly mediatised, regionalised and globalised politics of the future.

**URBAN IDENSITY®**

Within these new hybrid (“real” and media) landscapes, these interconnected networks, traditional categories for analyzing space are becoming obsolete. A new field of planning and design, combining urbanism and architecture with information/communication networks and media spaces is emerging. It is a field that requires new tools and new research categories in order to develop the new hybrid network urbanities.

In the contradictory dynamics of today’s urban environment with its antithetical tendencies of concentration and decentralisation, of functional mix and segregation, traditional terms of spatial distinction lose their validity. In this fragmented urban landscape, categories like “centre” versus “periphery”, “landscape” versus “city” and “functional zoning” (such as living, working and recreation), are becoming obsolete.

The polarity between private and public space is disintegrating. Public and private environments are becoming intermingled and blurring in the fusion of media and “real” space. We see this in the hybrid spaces of the publicly broadcasted (inverted) privacies of reality TV and the “Big Brothers,” in the media presence of war intruding on our living rooms and in the private (communication) space of mobile telephony within public urban space.

To understand this fusion, this superimposition and the interaction of media and “real” urban spaces, the new term ‘idensity®’ is introduced, replacing the obsolete conventional terms of spatial distinction. Idensity® does not differentiate between information/communication networks and urban/architectural environments. It thereby offers an integrated model for dealing with hybrid (media and “real”) space in the information/communication age and incorporates a wide range of future (communication) spaces.

It is a composite term, combining the word “density” - of real (urban) and “virtual” (media) communication spaces (density of connections) - and the word “identity.” ‘Idensity®’ integrates the concept of “density” (density of connections, density of physical and digital infrastructure, density of communication-spaces, etc.) with the concept of “identity” (image policies, urban brands, etc.). It can, for example, help in understanding the processes of spatial segregation and distinction between urban fragments that have qualities of ‘global’ performance and that can be seen as part of a “global urban condition” and those other, sometimes neighbouring (parts of) cities that lose in relevance and disappear from (global) mental maps. It can therefore be implemented as an operative tool to steer the processes of urban development.

But it is not a mere summation of the concepts of “density” and “identity.” It is instead a fusion, as it inverts “identity,” linking it to communication, “identity” being defined by connectivity.
Therefore, it does not just address the “clear-cut identity, the particularity, the individuality of the traditional places or sites” but also the layered ‘densities’ of the “non-lieux” (Augé, 1992) [“non-places”] of today’s generic cities, which are to be found especially in the realms of mobility and consumption (airports, hotels, shopping malls, motorway rest areas, etc.). It does not refer only to object-qualities but describes a field of superimposed (communication) spaces: the branded space of the chain-shop, the symbolic space of the traditional building the shop is located in, the media space of the-GSM...

This new term is implemented to describe and analyse the communication spaces of the coming “network society”, a society not so much based on the traditional, relatively static structures of belonging in the family, the corporation or the state, but on flexible, dynamic, ever-changing networks of exchange and communication. It carries the discussion on the urban from the morphological level of a formal description of the network patterns of the “network city” to a more integrated structural understanding of the networks of spaces for social communication.

INVERSIONS OF PRIVACY - IDENSITY® OF THE URBANITE

According to the traditional (bourgeois) concept of privacy, identity is based on private individuality. It is, however, important to be aware of the historicity of such a concept. As John Lucaks writes “Domesticity, privacy, comfort, the concept of the home and of the family [...] are, literally, principal achievements of the Bourgeois Age” (Lucaks, 1970, pp. 620-21). The notion of the “privy chamber” emerged in 17th century English literature at the same time as new private physical spaces came into being, when the introduction of the corridor layout in English interiors of the 17th century enabled the development of “private quarters.” But the expression “privy chamber” is also used metaphorically for the soul. The “privy chamber” is the container of (private) identity.

In the last year of the 20th century, “Big Brother,” the notorious reality-soap (with its networked container) was launched in Holland and was cloned and copied all over the planet. “Big Brother” shocked people profoundly and became a prime topic of debate in the media, from popular talk shows to scholarly journals (“Is this the End of Our Civilization?”).

What was shocking in “Big Brother” was the broadcasting (the inversion) of privacy. The participants of the soap defined their identity not in the “privy chamber” but in the public networked environment of the broadcasting-container. The ENDEMOL soap was an interactive environment (the television audience had democratic rights, influencing the sequels). The captives in the container/networks witnessed their existence in the “Real Virtuality” (Castells, 1996, pp. 327-375) of their media presence. They experienced their identity within the ‘densities’ of the (communication) channels.

In the same year, 1999, a big campaign was launched in Holland. On most billboards in major and minor cities, men and women, youngsters and the elderly – in short, the average Dutch person - were declaring “ik ben Ben.” This was not the mass expression of an identity crisis, but an advertising campaign for the launch of the new GSM company called “Ben,” targeting the public at large. The slogan was based on a simple play on words, “ben” meaning in Dutch “I am” and “Ben” being a common man’s name as well as the name of the mobile phone company.

But what makes this slogan such an interesting expression of our times is its definition of identity (I am: Ik ben) as connectivity (“Ben” being the network provider) with the ‘density®’ of the urbanite being defined as the density of the (superimposed media/“real”) communication spaces.
In February 2000 it was announced: “Ik Ben een jaar”.

This advertising slogan expresses in a very direct way nothing other than a new view of subjectivity and identity. Villém Flusser, the philosopher of communication, would write: “The new image of man looks roughly like this: we have to imagine a network of interhuman relations, a ‘field of intersubjective relations.’ The strands of this web must be conceived as channels through which information (ideas, feelings, intentions and knowledge, etc.) flows. These strands get temporarily knotted and form what we call ‘human subjects.’ The totality of the threads constitutes the concrete sphere of life and the knots are abstract extrapolations. [...] The density of the webs of interhuman relations differs from place to place within the network. The greater the density, the more ‘concrete’ the relations. These dense points form wave troughs in the field [...] The wave troughs exert an ‘attractive’ force on the surrounding field (pulling it into their gravitational field) so that more and more interhuman relations are drawn in from the periphery. [...] These wave troughs shall be called ‘cities’.” (Flusser, 1992, p. 84).

“The new image of Man looks roughly like this: we have to imagine a network of human interrelations, a ‘field of intersubjective relations’. The strands of this web must be conceived as channels through which information (ideas, feelings, intentions and knowledge etc.) flows. When these strands knot for a moment, they form what we call ‘human subjects’. The totality of the strands constitutes the concrete sphere of life and the knots are abstract extrapolations. [...] The density of the web of human interrelations differs from place to place. The greater the density, the more concrete the relations. These dense points form wave troughs in the field [...] The wave troughs exert an attractive force on the surrounding field (pulling it into their gravitational field) so that more and more human interrelations are drawn in from the periphery. [...] These wave troughs shall be called ‘cities’. [...] In this sense, the new city would be a place where ‘we’ identify ourselves reciprocally as ‘I’ and ‘you’, where identity and difference determine each other. That is not only a question of dispersal but one of exchange. Such a city presupposes an optimum dispersal of human interrelations: ‘others’ should become ‘neighbours.’ And it assumes that the cables of human interrelations are not unidirectional, [...] as with television, but in real networks, respons(e)ibly, as in the telephone network. These are technical questions; and they are to be solved by urbanists and architects.” (Flusser, 1992, p. 84).

The term ‘idensity®’ is a conceptual tool for researching and developing (social) space in the information/communication age.
REFERENCES

a) Books


b) Journal papers


c) Papers presented to conferences

FLUSSER, V. (1989) “Vom Unterworfenen zum Entwerfer von Gewohntem”, Intelligent Building,
University of Karlsruhe, Germany (1989).