

Design Sciences & Technology

Volume 21 Number 2

Velásquez P and Letelier S (2015) Large screens in the liquid perception of urban landscape, International Journal of De-sign Sciences and Techno-logy 21:2 179-192

Editor-in-Chief:

Reza Beheshti Khaldoun Zreik

Editors:

Daniel Estevez Edwin Dado Mithra Zahedi

europia

ISSN 1630 - 7267

ISSN 1630 - 7267

© europia Productions, 2015 15, avenue de Ségur, 75007 Paris, France. Tel (Fr) 01 45 51 26 07 - (Int.) +33 1 45 51 26 07 Fax (Fr) 01 45 51 26 32- (Int.) +33 1 45 51 26 32 E-mail: ijdst@europia.org

E-mail: ijdst@europia.org http://www.europia.org/ijdst

International Journal of **Design Sciences and Technology**

Volume 21 Number 2



International Journal of Design Sciences and Technology

Editor-in-Chief: Reza Beheshti, Design Research Foundation, Netherlands

Khaldoun Zreik, University of Paris 8, France

Editors: Daniel Estevez, Toulouse University, France

Edwin Dado, NLDA, Netherlands

Mithra Zahedi, University of Montreal, Canada

Editorial Board: ACHTEN, Henri (Czech Technical University, Prague, Czech Republic)

AMOR, Robert (University of Auckland, New Zealand)

AOUAD, Ghassan (Gulf University for Science and Technology, Kuwait)

BAX, Thijs (Eindhoven University of Technology, Netherlands)

BECUE, Vincent (Université de Mons, Belgium)

BEHESHTI, Reza (Design Research Foundation, Netherlands) **BONNARDEL**, Nathalie (Université d'Aix Marseille, France)

BOUDON, Philippe (EAPLV, France)

BRANGIER, Eric (Université de Lorraine, France)

CARRARA, Gianfranco (Università di Roma La Sapienza, Italy)

DADO, Edwin (NLDA, Netherlands)

EDER, W. Ernst (Royal Military College, Canada) ESTEVEZ, Daniel (Toulouse University, France) FARINHA, Fátima (University of Algarve, Portugal)

FINDELI, Alain (Université de Nîmes, France)

GERO, John (George Mason University and University of North Carolina at Charlotte, USA)

GUENA, François (ARIAM-LAREA, ENSA de Paris la Villette, France)
HASSAN, Tarek (Loughborough University Of Technology, UK)
HENSEL, Michael (Oslo School of Architecture and Design, Norway)

HORVATH, Imre (Delft University of Technology, Netherlands)

KATRANUSCHKOV, Peter (Dresden University of Technology, Germany)

KAZI, Sami (VTT, Finland)

KHOSROWSHAHI, Farzad (University of Leeds, UK)

KUILEN, Jan-Willem van de (Munich University of Technology, Germany)

LAUDATI, Patrizia (Université de Valenciennes et du Hainaut Cambrésis, France)

LECLERCQ, Pierre (University of Liège, Belgium)

LEEUWEN, Jos van (Haagse Hogeschool, The Netherlands)

MONTARAS, Lopez de Ramon (ILIIA, Spain)

NEWTON, Sid (University of New South Wales, Australia)

PAOLI, Giovanni de (Université de Montréal, Canada)

REBOLJ, Daniel (University of Maribor, Slovenia)

ROBERTSON, Alec (4D Design Futures Philosopher, UK)

RUITENBEEK, Martinus van de (Delft University of Technology, Netherlands)

SARIYILDIZ, Sevil (Delft University of Technology, Netherlands)

SCHERER, Raimar (Dresden University of Technology, Germany)

SCHMITT, Gerhard (ETH Zurich, Switzerland)

SCIAMMA, Dominique (Strate Collège, France)

SMITH, Ian (EPFL, Switzerland)

TROUSSE, Brigitte (INRIA – Sophia Antipolis, France)

TURK, Žiga (University of Ljubljana, Slovenia)

ZAHEDI, Mithra (University of Montreal, Canada)

ZARLI, Alan (CSTB, France)

ZREIK, Khaldoun (University of Paris 8, France)

Large screens in the liquid perception of urban landscape

Paola Velásquez* and Sofía Letelier**

- * Faculty of Architecture and Urbanism, Universidad de Chile, Santiago, Chile. Email: paovelasquez@uchilefau.cl
- * Faculty of Architecture and Urbanism, Universidad de Chile, Santiago, Chile. Email: sletelie@uchile.cl

The permanent or ephemeral irruption of moving images in urban space provokes changes in the experience of a landscape, impacting on the notion of space itself: by moving the attention' focus from static accidents to changing focuses, the interest vector becomes predominant in heightening the void of space, while its borders – the landscape – become plastic. The acceptance of ICTs by society, their technical advances demonstrated by the use of screens with seductive design, allows for a foretelling of the phenomenon's expansion, which will shape a new perception of urban space and its experience. Since moving images will define the reading of the 21st century space, as the impact of automobile or large-scale billboard advertising did in the 20th century, it is necessary to know in what specific ways the irruption of large-scale LED screens happens in Santiago, and its degree of induction in spatial perception.

Keywords: urban landscape, LED screens, information and communication technologies

1 Introduction

The appealing images displayed by large digital LED screens in urban spaces is one of the most dynamic, multiple, and diverse component of the contemporary landscape. Ever-changing images participate in visual surroundings, inserting texts and textures – in a way unthinkable before – on surfaces and architectural bodies. This ever-increasing complexity, unjustly relegated by planners and architects, is today one of the most significant components of the city and demands a redefinition of the aesthetic and symbolic values modified by their insertion. Not only those relative to buildings where the screens parasite, but also the values that reclaim the understanding of the current image of the city need to be examined.

A previous work[11] showed how appealing images participate in urban dynamics, establishing a new stratum in the city's construction and how images' constantly changing quality makes them the most dynamic component of the urban landscape. This work also suggested that the observation of this stratum allows for the inference of variations in economic, political, social or artistic dynamics. The specific conditions of how the phenomenon of fixed images (advertising, graffiti, tags, signage) and moving images (screens and neon lights) develops in a city can be understood as one of the identity aspects that characterize a city in a particular moment.

In Santiago de Chile, new technologies have been quickly adopted in all spheres of society. Two local aspects can explain this phenomenon: first, its recognition as a sign of trendiness; and second, as an eloquent sign that shows a modern city integrated to the global economy. This has fostered the indiscriminate installation of technological devices for communication in main public spaces and freeways, reaching in short term a fast development in some neighbourhoods.

We needed to identify which perceptual dimensions are impacted by digital screens, considered in their dual function: first, as an object that modifies the physical urban space in its diurnal and nocturnal temporalities; and second, as a way of communication that spreads messages, light and perspectives

external to place and time, therefore inducing perceptual and notional dislocations of the individual in public space. Duality that is our object of study: on one hand, the contextual insertion of the image inscribing itself in the transformation of the aesthetical culture of society; on the other, the degree in which it shapes perceptive practices revealing the current sense and identity of a place.

Given that our object is the elasticity of perception of the image/context pair, we consider the polysemic concept of landscape as a social construction of dual dimension – physical and symbolic – whose articulation allows for a wider rethinking of the role that the kinetic image plays when superimposing the building and its urban setting. From here, we sought to build a global scope of the role of visual appeal in mental place composition and in the modification of the inhabitant's urban experience, because of its topological function, new orientation and meaning vectors are involved in the notional construction of space.

Assuming that the large format moving images installed in public spaces are so appealing that no one can remain unaware of them, in countries like Chile our hypothesis is that they expand the notional aptitudes demanded by present times: they increase flexibility on perceptual capacity by imposing rhythm, colour, and messages overlapped within the accustomed perceptive field. We assumed that the dynamics of this phenomenon is capable of embodying enough stimuli to activate the appreciation of the unexpected and the undetermined, activating the demands of contemporary thought –expressed by the production of literature and philosophy since the latter part of the 20th century-, from the value of uncertainties to double messages. Everything happening in this moment is now (time) and here (place), the two determinant principles that define a 'landscape moment'. So, from examining inhabitants' reactions, it would be legitimate to infer how digital screens model the notion of a perceptive space/time, showing how the displacement of focuses of attention changes the perception of shapes and dimensions, until the void of public places is assumed as an alive three-dimensional body, ever changing in a liquid environment.

In fact, it was confirmed that the saturation of visual and experiential stimuli to what *santiaguinos* have been submitted, make them tolerant to ambiguities and contradictions, while they show more alertness to novelty and being capable of accepting the undetermined, the indiscernible and provocations, even dualities or the transformation of meanings. For example, when a commemorative static monument that is traditional of a place appears competing with huge illuminated and blinking artefacts; or when the architectural layout that originally shaped the public space is no longer a motive of interest, urban landscape becomes a simple support for devices. We found also that in presence of screens, the preconception that people have of a place no longer describes its physical structural elements, but instead allude to events and previous experiences that invoke a personal relation with the place; participants refer to the metanarratives that the place evokes, shutting down the formal and determinant notions that experts manipulate when planning. Individuals show openness to chances that open a space for their subjective interpretation of a place – as an open system- and to the expectation of phenomena rather than the physical reality.

Taking into consideration a Chilean citizen that evolves with the flexibility demanded by the contemporary attitude, as an approach to this particular case – Plaza Italia in Santiago – we propose the "landscape moment" as the focus of this study, inscribed at the time when the installation of LED screens took place; when the phenomenon of the images in movement could be detected as one of the acting stimuli that composes the whole experience of urban space. "Landscape moment", a concept considered as an instant or a detention in the landscape process, is a legitimate approach to a particular case study [4], because in the urban temporality, the "landscape moment" is a conjunction of time and place, even though it is always inscribed in an historical continuity.

With this research we aim to point out to the discrepancy that exists today between urban design based on specialists, spatial and aesthetic considerations, and a design prepared to balance the practical and

psychological needs of the inhabitants that relate to a space invigorated by ICTs communication devices that modify their perceptive dynamic and the experience of the actual city. Because the continuous expansion of the phenomenon and the emergence of new situations related to ICTs are redefining the relationship with time and space, they open new possibilities for participation of citizens in the construction of the built environment; meanwhile, they create new ways of relating to this liquid medium.

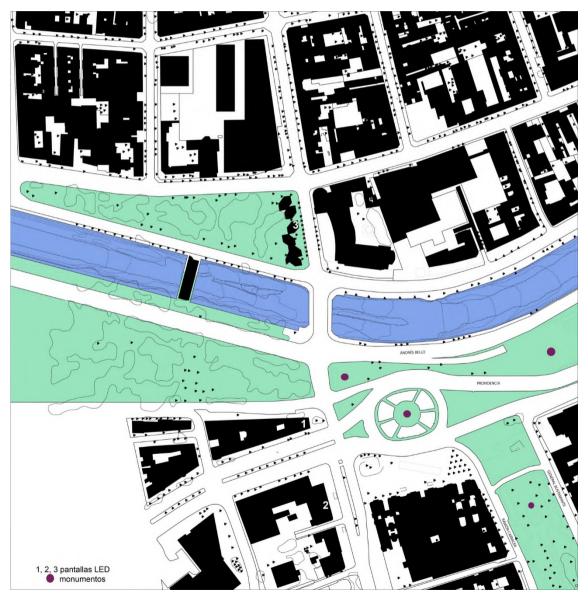


Figure 1 Plaza Italia. Prepared by the authors, surveying, location of LED screens and monuments

2 the case and its approach.

Plaza Italia ("Italy Square") is a flagship place in the city of Santiago; a roundabout that joins important roads and other public infrastructure, neighbourhoods and social groups, forced in shape by a river and a hill. It is a huge urban void of unique dimensions in the city. Such spatiality and its historic role have made it propitious for the installation of commemorative monuments, cafes, theatres and other services, causing the concentration of meaningful activities and different sort of elements. But, while it unites and concentrates, it also divides and manifests contradictions: from being the city's vertex at the beginning of the 20th century, it is now a main centre; one that summons but at the same time limits two socio-economic realities while it clearly divides the traditional town from the contemporary development. Its ambiguous character and its scenic amplitude have consolidated it as the main expression place for collective celebrations, displeasures, claims and emerging artistic demonstrations in Santiago, turning it into the most important meeting point of the city.

The conditions and qualities of Plaza Italia favoured the installation of architectural vanguard styles during all the 20th century and the resulting morphology of its borders prompted the early emergence of large neon signs, replaced afterwards by large billboards and finally LED screens over buildings, a coronation that does not recognize their architectural quality as they are utilized as mere support. Thus, Plaza Italia became a privileged place for communicative seduction linked to ICTs on an urban scale, bringing huge perceptive stress (visual, listening and attention) to people, by superimposing rhythms, movements and information in discordant temporalities.

In Plaza Italia, important city elements converge, as we see in plan (Figure 1): the *Mapocho* river that crosses Santiago from East to West; three parks of important magnitude; four monuments erected in different periods of time; and several successive building styles: an art deco architectural set from 1929 that shapes the square's southern border; two middle high buildings from '60 decade located on the west side, and on the southeast corner the *Telefónica*'s corporate tower that in the 90s imposed a new scale in that space.

In order to encourage a change in the urban design present paradigm, we formulate a methodology that integrates quantitative with qualitative aspects as a research approach for this complex case, considering objective, sensorial and symbolic issues in a complementary way. The Methodology employed is not based on expert observation, but in the experience of the passers-by (sporadic or quotidian people). Knowing that usually the inhabitant's experience is relegated by the specialists in projects and decision-making, we place the experiential aspects at the centre of this research. This multidimensional approach aims to construct a more complex analysis oriented to an integral improvement, not only of the urban scene, but also the physical experience of the "ambience", all those components in-between the individual and perceived elements, including the dimension of the senses.

The strategies utilized to build a global vision began by applying a morphological and visual landscape analysis: diurnal and nocturnal behaviours observations (by a team of architects and anthropologists); followed by a survey applied to regular users of the site regarding the development of remembrances that could be translated into objective and subjective metaphors of Plaza Italia; and finally, a set of semi-structured interviews *in situ* to frequent users of the site (pedestrians, drivers and residents) applied during the quotidian parcours. The variety of results enabled us to dismiss various topics such as: the impact of perception and individual experience in shaping and giving magnitude to the mental construction of space and its symbolization; in which way LED screens (artefact and its dynamic communication) transform space causing changes of scale by installing new focal points as a starting anchor for space reading, etc. The results of these various methodological actions were related and compared enabling a dynamic characterization of Plaza Italia.

To analyse how inhabitants integrate advertising screens with the experience of space, and how they are read and valued from different means of displacement, interviews were applied to a sample of thirty people (pedestrians, residents and motor passers-by) chosen randomly by category, with the sole condition that they usually frequent the place, most of them every day. This instrument, designed and supported by a team of anthropologists, enabled the identification of how -and in what particular circumstances- ICTs and their inherent devices are incorporated to experience; and how much they affect the relation of the individual with the context in the estimation of dimensions and meaning, until reconfiguring a subjective reality of the physical space of the Plaza.

To identify the precise effects of screens in the configuration of the perceived landscape in association to the topological function of those objects, other different methodological resources were combined, such as: the analysis of the objective visual landscape by means of photographs —as static representation of the landscape-; the observation *in situ* of social behaviour, combining direct observation in the field with specific questions in the interviews. Knowing that any visualization of the landscape encompasses a structuring function along with a constant dynamic of transformation, during interviews people were asked to draw over a diagram the limits of the boundaries of what they considered "Plaza Italia". This task allowed us to compare reality with visual perceptions, the elements that produce induction to act and the assessment of it image, together with its aesthetic appreciation, existential value, and cultural meaning.

In parallel, other individuals, while being away from the site, were asked to elaborate very short metaphors relative to objective and subjective aspects that the term "Plaza Italia" suggests to them, in order to obtain the pre-concepts acting behind perception and to capture the condensed sense they give to place. These metaphors were analysed quantitatively and qualitatively, and those results acquired from metaphors surprisingly correspond to those obtained in interviews. Both frequent passers-by who travel through Plaza Italia on a daily basis and citizens of Santiago more generally, who know the site but do not necessarily incorporate it to their everyday lives, have constructed transcendental and dynamic notions of Plaza Italia, our case study. The obtained results also suggest a correspondence between those metaphors, individuals' constructions of Plaza Italia, and the data obtained by experts through interviews and on-site participant observation.

Finally, a graphical representation of the results was developed to allow the comprehensive visualization of the perceptual state of this space.

3 The Plaza Italia "Landscape Moment".

Landscape is a mental *construct* generated when there is a link between the stimuli of a space —a tangible structure-, and the human experience submerged in a determined socio-cultural group. A person who captures stimuli by the senses and his/her intellection, when visualizing and interpreting a significant entity, is capable of apprehending a *percepto* with sense and value, induced by a cultural context. Under this scope, we have considered two levels of landscape assessment[7]: that of its physical production -which proposes the substances to shape a *constructo* as an insight-, and the one of its perception, which configures the final notion of that landscape as an instant and meaningful mental whole. The integration of both spheres is the appropriate focus to observe the effects of LED screens installation on experience — a particular class of stimuli — because a certain recursion exists: the landscape frequently converts itself into a metaphor that induces the dominant visual tendency of the social meaning as a whole.

Approaching the perceived landscape as a recursive tool allows us to interrogate the elusive reality by examining the effect of at least one of the quotidian elements that form it: the giant and moving images materialized in digital screens, the most common manifestation of ICTs visible in the city until today. The system of images that, together with its emitting artefact, invades both physically and symbolically the

urban space with its own logic, contributes to the perception of space in a distinct way. Because the screens distort the previous attention focuses, reorienting the spatial position with new appealing interest items, they modify the reference plans in height by catching the eye at a new level; alter the functional time of transiting with the advertisement's own times, while inserting other distant climates, places and colours in unexpected and fluctuating contents.

Our study is inscribed in the landscape moment of the LED screens appearance in Plaza Italia, which conjugates a bi-temporal condition: on one hand, the historical time associated to what is permanent in that place; and on the other, the brief time of the ephemeral event of emerging situations. We consider a "long time" the building complex urban process, which ideally has absorbed into the landscape memory the figure of the "short time" events of the present, which implies a way of conservation of its character, structure, symbol and identity support for changes. The actual landscape, therefore, constitutes a dynamic space/time "presentation" – constantly constructed by the inhabitant in his actual dealing with objects and events in that space – and who colonises it through prevailing "representations", found here as preconceived metaphors during the research process. Our approach takes into consideration that in places with heavy traffic, such as Plaza Italia, we experience the landscape mainly while in movement. It does not seek for static or absolute notions of beauty of the physical surrounding (traditional notion of landscape), but for the identification of structural elements of the landscape, permanent or emerging, in an intent to capture a process that must incorporate new elements or transformations while guaranteeing the continuity of its symbolic meanings and significances associated to a community and time.

In order to define the 'landscape moment' of the case we are addressing, we must take into consideration and relate the variety of perceptive data produced by the territory (static, geographical) and the superimposition, juxtaposition or interpretation of different syntaxes (architectural, sculptural, commemorative, etc.). Each period has its own scale and canonical frame and is defined by its own rules (for example, designed parks and motor ways) and the "emerging" reality, whether architectural or an urban complementation (variant advertising, signage, flows, crowd barriers, activities). The acceptance, naturalization, or discrimination of this juxtaposition allows us to visualize the identity of the current landscape.

The second period represents a transition in the physiognomy of the space, the plaza and its uses: the consolidation of the park and vegetation along the river generated a visual continuity between the city and the geographical context on the North side of the city, while the other three sides of Plaza Italia consolidate an architectural boundary. This period is characterized by the intensifying presence of nature in the city and a considerable proliferation of motor vehicles.

During the third period, beginning in the 1980s, we can identify a clear transformation of the landscape defined by a fast increase and protagonism of road surfaces (pavements and gardens), turning the space of Plaza Italia from a central one into a lineal space along the main axis of mobility in the East/West direction. Despite these transformations, the landscape conserved a sense of amplitude in terms of its depth and extension, given by the *Mapocho* River and the Andes mountains as an identifying background, fundamental elements of the *santiaguino* imaginary. And a very significant change takes place in the beginning of the 1990s: the insertion of a corporate tower belonging to *Telefónica*. Its scale breaks down the horizon and depth of the visual field towards the East, and its imposing presence changes the surrounding space: from being open and isotropic, it is now contained and focused on a centripetal character. It defines a vertex that, by itself, works as a limit of the place (Figure 2).

Even though by that time there were some illuminated billboards in some points of the square, these were very demure. Recently in 2010 the first LED screen (Figure 1, screens 1: 12x8mts, full colour LED video display, 10p, vision distance from 10 and more than 300 mts) was installed in the Western edge of Plaza

Italia, on the top of a ten-floor building; and a second one was installed at the same side 50 meters south on a four-floor building with same characteristic but different dimensions (Figure 1, screen 2: 18x6mts). Finally, last year a third one was installed specially for pedestrians at the other side of the river on an advertising support installed over the sidewalk (Figure 1, screen 3: 8x6mts, on 8 meters column support)



Figure 2 Plaza Italia 2000-2010 (by the authors)

From the ethnographic survey emerges this 'landscape moment' of Plaza Italia as a contradiction in terms of how it is sensed: while it appears as a point of path confluence, a heart, a node, a bellybutton that unites, at the same time it separates/divides socio-economic realities; while it articulates opposite things from different categories – geographic entities (the river, the hill), civic celebration or protest, and all sorts of cultural expressions, it marks independent sections of urban government with their own and different regulations. This dual or undefined character makes it the most important meeting point of the city, from sustaining face-to-face *rendez-vous* to joining a social anonymous meeting to claim for any significant cause. It simultaneously behaves as incision and suture.

Another paradoxical aspect that springs from our survey is its topological place quality "without being a place" since it resists all or any description. To the passers-by it seems to be rather a concept -or a *percept*-associated to a place of undetermined edges, whose nucleus you cannot "enter"; it represents a central "void" within an impenetrable roundabout; a central circle that contains the symbolic statue that gives the official name to the plaza -"Baquedano"-, nowadays being diminished by the evolving context. As a consequence of this multiple paradox, we needed to determine the limits and extension of the mental construct named Plaza Italia around this ambiguous centre and the configuration of its landscape shape, looking for the effect that the screens apply to such perception. Because for us the urban landscape cannot be understood as a 'panoramic and vertical' portrait of a city scene, but rather as a volume -or corpus- where the observer is immersed while practicing hermeneutic activity.

3.1 Extension limits of the "Plaza Italia" percepto.

To begin processing our obtained data, we analysed those sections of interviews where we asked passers-by to draw the limits of what they considered Plaza Italia to be by drawing on an urban map (technical plan). Afterwards, we obtained one single image by superimposing all results (Figure 3). From here we could make three basic distinctions of recognisable limits for the entity called by people "Plaza Italia": A), the formal garden confined to the outline of the roundabout with the central statue, an impenetrable place due to its intense vehicular traffic on wide roads, plus the enclosure of mobile fencing -an intent to protect the monument- that has become permanent. B), the marking out of the traditional common usage of this carrefour (changing means of transportation, public services, amusement, etc.), contained between strong configurative entities: to the North side by the *Mapocho* river and a segment of *Forestal* Park; to the South by an *art deco* U-shape buildings ensemble and two higher ones at the edges. And C) the boundaries of a broadened zone understood as "Plaza Italia", that involves adjoining neighbourhoods of gastronomic,

cultural and other activities associated to personal experiences and also to the radiation of the square due to its connectivity.



Figure 3 Drawings of areas of Plaza italia, made during interviews (by the authors)

In spite of the fact Plaza Italia is a roundabout with well-defined plan layout, building, practical and natural limits, when distinct instruments are applied to people (regular passers-by, present individuals and motorists) its perceptive limits appeared surprising. Firstly, the elastic diversity of edges identified in the descriptive metaphors of the place; and secondly, the variety embodied in the drawings of the edges depicted over a plan by people during the interviews (Figure 4, superposition of results). By observing the results, we were able to explain to what degree the participation of the screens is responsible for the fact that there is so much difficulty and divergence in describing the extension and dimension of what is referred to as "Plaza Italia" beyond its spatial configuration and its meaning as a place.

Although the limits seem to extend in a tentacular way to the south - where large static ads are placed over buildings – the limit is perceived relatively close to the existing built-up edges, suggesting that the addition of architecture is un-invasive; it impedes both interest and attention and sustains other free wonderings and expectations for the perception of the site. On the contrary, when looking North, interviewees recognize and remember more programmatic facts; a diffused space in increasing expansion and diversification is conceived, even though in this direction – the N-S axis – the last LED screen has been placed: a powerful screen installed on the other side of the river, mainly designated for pedestrians and strongly imposed into their visual field. Mentioned as the most memorable stimuli of the North perspective, this screen seems to act in a particular way suggesting that a sole screen in absence of built visual limits – as it happens towards North – is taken just for a technical device rather than as an urban component entitled to be considered when we asked to define boundaries. The continuous emergence of traffic signals, advertisements, and other practical devices is a fact that conditions Plaza Italia to an active redefinition according to dynamics that are external to it. And we can say that is not the brightness nor the novelty that impacts the conscience the most, but the relations between the fixed components with the emerging elements that are the main inductors of spatial perception in the urban reality.

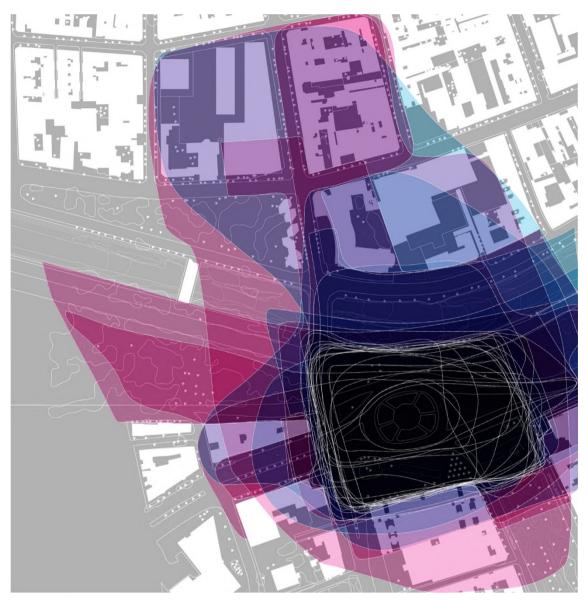


Figure 4 Superimposition of horizontal limits during the interviews. Prepared by the authors from the drawings of passersby

Instead, along the East-West axis – parallel to the river, avenues and parks – limits are more clearly identified, especially on the West side, where the first LED screens were placed above two buildings defining that edge. The front of those screens looking East establishes a vector with the observer that determines a 'back' –an undefined "beyond" – towards the West. For people coming from the East, even though a unanimous verbal recognition of *Telefónica* tower was confirmed as the threshold that defines a vertex of the place, the effect of the screens at the opposite end extends that threshold's flexibility, as they are oriented to be seen from afar and while in transit along the East-West direction. For drivers, screens are a far-off signal of the Square's proximity; and considering screens as an inherent part of the Plaza; drivers

situate the border of Plaza Italia at the location where they can first see the screens. The elongation of our research site towards the West -where LED screens are placed on buildings, installing a 'back'- is weaker and shorter, even though it extends for practical reasons and bifurcates into: one determined by the distance of a bus stop signal, another given by the knowledge of enjoyment in the park.

So there is no fixed boundary in the horizontal concept of Plaza Italia, which broadens to the North side - even with the intervention of a low screen - it extends beyond the river to the hill; and by the East side it expands through the axis that concurs to Plaza Italia from where the daily presence of screens announces the site.

3.2 Vertical limits of the space

By setting new interest focuses, the screens install new limits to Plaza Italia in terms of its height, which varies from day to night times. During the day, the brightness of the screens is mitigated by the natural light, and the contrast of the artefact itself is what attracts our attention the most over some buildings, compelling us to look away from the pragmatic horizon and broadening our angle of vision. At night, however, the screens reach their maximum appeal function; their intense brightness unifies fix advertisings and screens, diminishing the architectural features of their individual supports. In addition, they darken the rhythmic and continuous presence of lampposts and road lights, making the physical limits of the void invisible.

By night, the screens (Figure 5) reconfigure the place: the apparent unity acquired at night by fixed and digital screens -given by their similar dimension, luminosity, direction, shape and height, but also by the orthogonal edge in which they are located-, gives the Square both regularity and a certain height homogeneity, attributes it lacks during the day.



Figure 5 Photography Southwest direction 2013 (by the authors)

The complex configuration is defined by night by the large luminous emissions that arrange the visual field. A cornisamento that provokes enough stimuli for the understating of the space integrates it into a global image. The sensation of 'container' given by screens explains why among the interviewees, faced with the option of choosing between photographs with and without screens, a majority chose the image with screens at night-time, while referencing a feeling of movement and safety. In front of images where the existing luminous advertising has been suppressed (Figure 6), the extension of the space expands in different axis when no limits are perceived at the top, despite a prevailing titillating plan of lights at the ground level.

During the day (Figure 7), the linked *cornisamento* of fixed and mobile images screens have lost their uniqueness, each playing a role in the landscape of Plaza Italia. The allure that by night defines the edge of Plaza Italia is now broken. The appealing colours and brands lying over extensive areas of the large format billboards are the most remembered images, while only the existence and location of screens is mentioned. Even though screens appear as a "presence" in the interviewees' discourse, their messages in constant

change, do not manage to be retained. Such segmentation of types of adverts in perception splits the notion of the configurative edge, accenting the variety of buildings that are individualized only as support of such and such ad or screen.



Figure 6 Photography Southwest direction 2013 (by the authors) Prepared by the authors, intervention

The daytime photograph that proposes the suppression of the screens had an excellent acceptance in almost the totality of interviewees (Figure 8). This can be explained by the bigger homogeneity acquired by the site because perceptively the built edge unifies itself in one unique architectural type. The buildings are no longer the basis for the advertising images, the sustaining meaning that has belittled them in people conscience. By this simple gesture a change of scale could be produced in this place.



Figure 7 Photography Southwest direction 2013 (by the authors)

The interviewees value the nightly presence of digital screens; but in front of the daytime options they go for the one with no screens, showing that the specialists have not yet managed their parasitic insertion on buildings, a growing phenomenon in contemporary urban places. The instruments applied here reveal that the presence of screens — whether as luminosity or as artefact — beyond their messages, are shaping the perception and modifying the formal notion of a space, both in extension and height. They generate a dynamic spatial body for the void that expands and contracts in different ways during the day and at night.



Figure 8 Photography of Southwest direction 2013 (by the authors)

3.3 Preconceptions and associations expressed in metaphors

As it has been mentioned before, a group of regular users of Plaza Italia, while being away from it, were asked to express their objective and subjective feelings towards the place by relying on metaphors or analogies, with the aim of extracting indexical contents from the essential meanings that act as preconception when facing the real space.

From their metaphors it was deduced that the "objective" nature assigned to Plaza Italia resides more in its urban function regarding the city –its pivotal role in terms of connectivity, its position and concurrent roads, and not in terms of concrete or hard elements (plan shape, components, configurative or commemorative entities) or in its human and vehicular density. The screens are hardly mentioned in this part of the survey. This indicates that the objective sense of Plaza Italia is quite abstract and the insertion of screens – images and artefacts – does not find social resistance to amalgamate with what already exists and which appears to be of little significance.

Regarding the metaphors that seek to trace the "subjective" load [what do you mean by load?], the "social spatial" role is the one that acquired the foremost importance -meeting point; mass and anonymous celebrations, spontaneous artistic expression, and ideological demonstration or protest-. However, its paradoxical nature is highly recognized: to be at the same time a point of integration and socio-spatial segregation,, a centre or a limit that both brings together and repels. Even though the screens are specifically mentioned very little here, they are considered as a positive value to the scenery of the space; and because of its complex dynamics, other forms of communication are expected.

The preconceptions that inform the perception of the Square tend to refer its functional comprehensibility and also its open potential to embrace the expression of an active citizenship. And in real experience, the passers-by of Plaza Italia naturally assume the juxtaposition of three different syntaxes: the static geographical one; the canonical, defined with rules of design; and the emerging manifestations, to which its subjectivity is opened for a more global syntax that could give coherence to the changing void perceived: that plastic or liquid entity to which the screens contribute in this landscape moment, whose skin –"the" landscape-, follows it in its contractions and elongations. Thus, the landscape becomes elusive.

4 Final considerations

Considering the fact that the landscape process is defined by the superimposition of events, both physical and social, we found that there exists a big distance between these two spheres in the *santiaguino's* perception, a fact that could be considered positive, considering the amazing changes that are taking place in large contemporary cities, like Santiago. The non-object, but rather notional and abstract character given to Plaza Italia's landscape has the capacity to reconcile the past with the present embracing all kinds of interventions, if the traditional sense of this place is maintained. The natural manner in which the successive overlapping of physical shapes are embraced in the evolution of the dominant taste and the diverse events associated with emerging ones, show patterns of thought and aesthetic sensibility that are characteristic of contemporaneity in this far away country. We can argue, then, that the least powerful and formally consolidated the physical landscape is to impress a defined construct, the more possibilities the landscape moment has to open up to new transformations.

Given the evidence of an evolutionary process in this landscape moment of the place, we asked ourselves; how does the consistency of the collective imaginary of Plaza Italia persist today? And considering the predatory dynamics that the space faces – like any other contemporary city does – by means of its character of topological concept, it becomes an urban *gattopardo* that "changes in order for nothing to change". An important aspect of preservation mentioned by Augustin Berque [2], who considered the landscape as a

constitutive motive of social bond, is that it is no longer necessary to choose between memory and modernity; the social and economic changes must register its meaning into the continuity of the landscape process avoiding dramatic breakdowns.

As it was seen in terms of its limits, there is no fixed notion of Plaza Italia regarding its horizontal boundaries, which broaden continuously. The presence of screens –whether as luminosity or as artifact–beyond their messages, generate a dynamic spatial body by the void that expands and contracts in different ways during the day and at night: that plastic or liquid entity to which the screens contribute in this landscape moment, and whose skin –"the" landscape-, follows it in its contractions and elongations, making any landscape elusive, but surprising and stimulating for today's sensibilities.

Plaza Italia is a space in expansion [11]; not only through the digital screens but also due to the emergence of other ICTs, like the portable artefacts in public space, that together generate a palimpsest of perceptive stimuli shaping the urban experience. And the continuous emergence of new traffic signals, advertisements, lighting shows and other devices are a fact that conditions public places to an active redefinition according to dynamics that, generally, are external to it.

The idea of "landscape moment" as an approach to the study of urban spaces, turned out suitable to discover the thresholds of tolerance of the perceptive subjects in the contemporary time. And the participation of digital screens in the transformative perception phenomenon revealed a problem that needs more attention: the manner in which information screens irrupt in urban space and architecture, both in its daily or nightly appearance, is an aspect not yet solved.

If the first advertising billboards started from a dialogue between the ornament and the adorned, with the elimination of the ornament, the modern movement installed a differentiated evolution for architecture and for advertisement images, a purism that did not embrace the "para-architectural", things promoting what we usually see in the current city: the alteration of architecture by using external additions. Many times an iconic ad was privileged and its large format expression is what Paul Ardenne [1] refers to as "folding screen architecture", where images mask a building. But today's technological advances enable the redefinition of the relationship between digital image and architecture. The dematerialization and independence between image and its support, invites us to envisage a process leading towards the fusion of image and support in the conception of a project, where image and architecture will participate at the same expressive level as it did in the beginnings of social communication through images in cave paintings; images that extend to the urban scale as in some pavilions at Shanghai 2010. When images become indifferent to their support, ICT cause changes such as: the experience of simultaneous worlds, the interaction with images in real time and the intersection of real and virtual space.

Today, advances in technology enable a creative redefinition of the relationship between digital image and architecture. The present capacity to allow for independence between an image and its support, allow us to foresee new effects emerging from the project's conception, where image and architecture will participate at the same expressive level to offer stimuli that could induce positive *constructos* and *perceptos* to passersby, contributing to a contemporary comprehension of space.

The urban trending scenario is determined by the dissimilar evolution of architecture's disciplines, urbanisme, the handling of images, and sciences relating to perception. While the images' dislocation manifests in all fields and scales of our day-to-day life, producing unpredictable phenomena, the management and design of the urban medium still shows a reactive development based on the solution of problems and the control of phenomena, demonstrating a discrepancy.

However, while the images dislocation manifests itself in all fields and scales of our day-to-day life, producing unpredictable phenomena, the management and design of the urban medium still shows a reactive development based exclusively in the solution of problems and in the control of phenomena.

If – as demonstrated – a few fixed digital screens placed for practical and commercial reasons are capable of modifying or even shaping the perception of a space in terms of its extension and height, a new approach is needed -in urban research and in design- to achieve greater changes in the relationships of citizens with virtual images in public spaces. An integrated and long-time claimed approach [9] where a new attitude towards buildings and urban design transforms the experience of cities, appealing to the plurality of senses and interactivity. Will the citizen acquire the *habitus* to the permanent transformability of urban space? We think that they are starting to do so by conceiving public places more like a topological notion rather than an objective settlement, and that very soon architects will assume this fact and will stop talking about the visual landscape to refer instead to the flowing urban landscape.

Bibliography

- [1] Ardenne P (2005) Terre habitée : humain et urbain à l'ère de la mondialisation, Archibooks
- [2] Berque A (1994) Cinq propositions pour une théorie du paysage. Coll. Pays paysage. Seyssel: Champ Vallon
- [3] Berque A dir (2006) Mouvence II, soixante-dix mots pour le paysage. Paris: Ed. De La Villette
- [4] Clément G (2001) Le jardin en mouvement. De la vallé au jardin planétaire. Sens & Tonka Paris
- [5] Cronin AM (2010) Advertising, commercial spaces and the urban. Palgrave Hampshire
- [6] Donadieu P and Perigord M (2005) Clés pour le paysage. Ophrys Paris
- [7] GÓMEZ A and LONDOÑO L (2011) Paisajes y nuevos territorios ed. Cartografías e interacciones en entornos visuales y virtuales. Anthropos/Universidad de Caldas España
- [8] Letelier S (2007) Lectura E Ideación de la Escala y Escalaje en la Arquitectura. Tesis doctoral, E.T.S.A.M.- UPM, Madrid
- [9] Moles A (1970) L'affiche dans la société urbaine. Paris: Dunod
- [10] Mons A (2013) Les lieux du sensible. Villes, hommes, images. CNRS Éditions Paris
- [11] Velasquez P (2012) Les images dans la ville. Manifestations des activités commerciales et citoyennes à Santiago du Chili. Éditions Universitaires Européennes Paris
- [12] Wachter S (2010) La ville Interactive. L'architecture et l'urbanisme au risque du numérique et de l'écologie. L'Harmattan Paris



International Journal of Design Sciences and Technology

Design Sciences, Advanced Technologies and Design Innovations

Towards a better, stronger and sustainable built environment

Aims and scope

Today's design strongly seeks ways to change itself into a more competitive and innovative discipline taking advantage of the emerging advanced technologies as well as evolution of design research disciplines with their profound effects on emerging design theories, methods and techniques. A number of reform programmes have been initiated by national governments, research institutes, universities and design practices. Although the objectives of different reform programmes show many more differences than commonalities, they all agree that the adoption of advanced information, communication and knowledge technologies is a key enabler for achieving the long-term objectives of these programmes and thus providing the basis for a better, stronger and sustainable future for all design disciplines. The term sustainability - in its environmental usage - refers to the conservation of the natural environment and resources for future generations. The application of sustainability refers to approaches such as Green Design, Sustainable Architecture etc. The concept of sustainability in design has evolved over many years. In the early years, the focus was mainly on how to deal with the issue of increasingly scarce resources and on how to reduce the design impact on the natural environment. It is now recognized that "sustainable" or "green" approaches should take into account the so-called triple bottom line of economic viability, social responsibility and environmental impact. In other words: the sustainable solutions need to be socially equitable, economically viable and environmentally sound.

IJDST promotes the advancement of information and communication technology and effective application of advanced technologies for all design disciplines related to the built environment including but not limited to architecture, building design, civil engineering, urban planning and industrial design. Based on these objectives the journal challenges design researchers and design professionals from all over the world to submit papers on how the application of advanced technologies (theories, methods, experiments and techniques) can address the long-term ambitions of the design disciplines in order to enhance its competitive qualities and to provide solutions for the increasing demand from society for more sustainable design products. In addition, IJDST challenges authors to submit research papers on the subject of green design. In this context "green design" is regarded as the application of sustainability in design by means of the advanced technologies (theories, methods, experiments and techniques), which focuses on the research, education and practice of design which is capable of using resources efficiently and effectively. The main objective of this approach is to develop new products and services for corporations and their clients in order to reduce their energy consumption.

The main goal of the International Journal of Design Sciences and Technology (IJDST) is to disseminate design knowledge. The design of new products drives to solve problems that their solutions are still partial and their tools and methods are rudimentary. Design is applied in extremely various fields and implies numerous agents during the entire process of elaboration and realisation. The International Journal of Design Sciences and Technology is a multidisciplinary forum dealing with all facets and fields of design. It endeavours to provide a framework with which to support debates on different social, economic, political, historical, pedagogical, philosophical, scientific and technological issues surrounding design and their implications for both professional and educational design environments. The focus is on both general as well as specific design issues, at the level of design ideas, experiments and applications. Besides examining the concepts and the questions raised by academic and professional communities, IJDST also addresses

the concerns and approaches of different academic, industrial and professional design disciplines. IJDST seeks to follow the growth of the universe of design theories, methods and techniques in order to observe, to interpret and to contribute to design's dynamic and expanding sciences and technology. IJDST will examine design in its broadest context. Papers are expected to clearly address design research, applications and methods. Conclusions need to be sufficiently supported by both evidence from existing research (reference to existing design research knowledge) as well as strong case-studies from any design discipline. A paper must contain at least one chapter on research questions, methodology of research and methods of analysis (the minimum length is 1500 words). The concluding chapter (the minimum length is 1000 words) will summarise the paper and its results. The concluding chapter also examines and discuss applications, advantage, shortcomings and implications of the investigation for both professional and educational design communities as well as for the people and the society. Also authors are also encouraged to include in this chapter a discussion of the possible future research that is required or is possible in order to enhance the research findings.

The papers considered for IJDST cover a wide range of research areas including but not limited to the following topics: Design research, design science, design thinking, design knowledge, design history, design taxonomy, design technology, design praxeology, design modelling, design metrology, design axiology, design philosophy, design epistemology, design pedagogy, design management, design policy, design politics, design sociology, design economics, design aesthetics, design semantics, design decision-making, design decisions, design evaluation, design sustainability, design logic, design ontology, design logistics, design syntaxis, design ethics, design objective, design responsibility, design environment, design awareness, design informatics, design organization, design communication, design intelligence, design evaluation, design education, design theories, design techniques, design methods, design operations, design processes, design products, design users, design participation, design innovation, design inspired by nature, design case studies, design experiments, etc.

International Journal of Design Sciences and Technology is devoted to further exploration of all themes and issues that are directly or indirectly relevant to the exploration, introduction, discussion of design sciences and technology, cross referencing domains and any other themes emerging in the future.

Instructions for Authors and Review Process

Pre-review Stage (Editor Global Review): Papers can only be considered for review when they deal with a subject relevant to the content of the journal. In addition all papers submitted must follow the journal's paper structure and Author Instructions before they can be considered for review. **These instructions also affect the content of the paper.** Authors can choose to submit a short paper (about 5000-8000 words). The preferred size of a paper (monograph) is about 10000 words (maximum 15000 words). The title must not be longer than seven words. Subtitles are not permitted. The maximum length of the abstract is 150 words. All papers must contain an introductory chapter with extensive literature review of similar research. The paper devotes at least one chapter to detailed discussion of research questions, research analysis and research methods. The conclusion will summarise the research and its results. In addition this chapter includes a detailed discussion of applications, advantage, shortcomings and implications of the investigation as well as future research for both design professionals and the design education. Submit a paper at this stage as PDF.

Review Stage (Peer Review): Only papers meeting all IJDST requirements can be considered for review. All papers are blind-reviewed by at least two expert reviewers. The main author of a reviewed and accepted paper will be notified with instructions to resubmit the paper. All reviewed and accepted papers have to be resubmitted, implementing reviewers and editors comments and/or suggestions. Only accepted papers conforming to instructions will be considered for publication in the International Journal of Design Sciences and Technology. A paper should follow the IJDST paper structure. The review process will be repeated until all requirements are met.

The first page of the paper must contain the full title of the paper as well as the Name (no initials) & Surname, affiliation, address, telephone, fax and email of the corresponding author to whom all correspondence to be directed. If applicable please also mention the Name (no initials) & Surname, affiliation, postal address, telephone, fax and email of the co-author(s).

The second page contains the full title of the paper (maximum 7 words), the sub-title is not permitted, an abstract of about 50 to 150 words summarising the content of the paper and 3-5 keywords for the purpose of indexing (the use of references in the abstract is discouraged). The length of a short paper is about 5000-800 words. The preferred size of a paper (monograph) is about 10000 words (maximum 15000 words). The use of Footnotes is permitted (maximum length is about 50 words). Footnotes should be numbered consecutively. For instance: [[17 A 'footnote' reflects additional information, a reference or the URL of a website]].

The paper will be written in the UK English. It will be single-spaced with 30 mm margins on all sides (paper size A4). Use Times New Roman for the main body of text (size 10), figures (size 8) or tables (size 8). The use of Bold, Italics, ALL CAPS, SMALL CAPS, etc. is discouraged. All chapters should be numbered consecutively (more than two level sub-headings is discouraged). All Figures and Tables with their respective captions should be numbered consecutively. They should each, be placed on a separate page, at the end of the paper. Give an approximate insertion point for figures and tables, between double square brackets. For instance: [[insert Figure 5]]. You will be asked to resubmit tables, figures and images if necessary. The paper must be submitted in plain text. Do not layout your paper. Do not use any styles or any automatic layout system. Please do not use 'Track Changes'.

All tables should be clearly referred to in the main body of text as Table 1, Table 2, etc. All Figures should be clearly referred to in the main body of text as Figure 1, Figure 2, etc. Line drawings should be of good quality. Use light background if possible (white is preferred). Photographs and screen-shots should also be submitted separately as JPEG files (use high resolution for better results). Authors should prepare high quality figures and drawings. The use of colours in your illustrations is permitted although the hardcopy of the journal is not published in colour. Maximum width and height of a figure are respectively 150 mm and 190 mm. Maximum width and height of a table are respectively 115 mm and 170 mm. All Equations will be numbered consecutively and should be clearly mentioned in the main body of text.

All references will appear at appropriate places in the main body of text. References are collected at the end of the paper and are arranged in alphabetical order (numbered consecutively) by the first author's surname, followed by initials. All authors should be mentioned. Dates will appear between brackets after the authors' name(s). This is followed by the title of the book, name of the publisher, place of publication and page numbers (if applicable). To refer to a journal paper, add the full title of the journal followed by Volume: Number and page(s), for example 20:2 89-124.

The number of references to the author's own previous publications will not exceed 5% of the total number of references. References that are not mentioned in the main body of text are not allowed. Examples of references to a book, a journal or a website are shown below:

- [1] **Beckett K L** and **Shaffer D W** (2004) Augmented by Reality: The Pedagogical Praxis of Urban Planning as a Pathway to Ecological Thinking, University of Wisconsin, Madison
- [2] **Blackman, D A** (2001) Does a Learning Organisation Facilitate Knowledge Acquisition and Transfer? Electronic Journal of Radical Organization Theory, 7:2 [www.mngt.waikato.ac.nz/Research/ejrot/Vol7_1/Vol7_1articles/blackman.asp]
- [3] Buxton, W (1997) Living in Augmented Reality: Ubiquitous Media and Reflective Environments. In: Finne K, Sellen A and Wilber S eds, Video Mediated Communication, Erlbaum, Hillsdale N.J., 363-384
- [4] **Dixon, N M** (2000) Common Knowledge: How companies thrive by sharing what they know, Harvard Business School Press, Boston, MA
- [5] Djenidi H, Ramdane-Cherif A, Tadj C and Levy N (2004). Generic Pipelined Multi-Agents Architecture for Multimedia Multimodal Software Environment, Journal of Object Technology, 3:8, 147-169
- [6] Gorard, S and Selwynn, N (1999) Switching on to the learning society? Questioning the role of technology in widening participation in lifelong learning, Journal of Education Policy, 14:5, 523-534
- [7] **World Bank** (2002) Social assessment as a method for social analysis, World Bank Group [www.worldbank.org/gender/resources/assessment/samethod.htm]

The definitive paper is submitted as plain text MS Word file for the PC (MS Word RTF format for the Macintosh). In addition, a formatted version of the paper (including images and tables at their approximate places) will be submitted in PDF format (to be used as a guideline for the layout). All figures must be submitted separately in high resolution jpg format. Submit your paper as an email attachment addressed to the Editor-in-Chief [Submit2IJDST@Gmail.com].

Author(s) of an accepted paper have to complete, sign and return a Copyrights Transfer Form to the publisher. This copyrights transfer assignment will ensure the widest possible dissemination of information. Papers published in the International Journal of Design Sciences and Technology cannot be published elsewhere, in any form (digital, paper-based or otherwise) without a prior written permission from the publisher.

The author(s) are responsible for obtaining permission to utilize any copyrighted material. For more details about this subject, please contact the publisher at an early stage.

A paper can be rejected at any stage if the requirements are not met. The decision of the Editor-in-Chief on all matters related to the International Journal of Design Sciences and Technology including the review process, publication of papers, etc. is final and cannot be disputed.

There is no deadline for the publication of an accepted paper that will be published online within one to four months after the final re-submission is accepted. The hardcopy book of the volume will be published when 8 papers are published online. The corresponding author of a paper published in the International Journal of Design Sciences and Technology will receive a digital copy of the author's paper free of charge. Hard copies of any individual paper (minimum 100 copies) and the hardcopy of the IJDST Volume (containing 8 papers published online) can be purchased from the publisher (ask for an invoice from the publisher IJDST@europia.org).



International Journal of Design Sciences and Technology

Design Sciences, Advanced Technologies and Design Innovations

Towards a better, stronger and sustainable built environment

How to Order

IJDST-online

You can view and download a digital version of individual papers free of charge from the journal's website.

IJDST Hardcopies

Hardcopies of individual papers (minimum order 100 copies) and volumes (minimum order is one single copy of the book containing 2 issues) can be ordered directly from Europia Productions. You need to send your **Request for an Invoice** (preferably by email, Fax or letter) indicating details of your order and the quantities. Please provide your full name and initials, postal address, email and telephone number. An invoice will be sent to you indicating the total amount of your order, the cost of packing/postage and method of payment.

Individual Subscription IJDST Hardcopies

Individuals can subscribe to receive a hardcopy of the book containing 2 issues for € 200.00 (incl. 5.5 % VAT, packing and postage). You need to send your **Request for a Subscription Invoice** (preferably by email, Fax or letter) indicating the IJDST Volume. Please provide your full name and initials, postal address, email and telephone number. An invoice will be sent to you indicating the method of payment.

Institutional Subscription IJDST Hardcopies

Libraries and organisations can subscribe to receive a hardcopy of the book containing 2 issues for € 200.00 (incl. 5.5 % VAT, packing and postage). You need to send your **Request for a Subscription Invoice** (preferably by email, Fax or letter) indicating the IJDST Volume. Please provide details of the library or organisation, name contact person, postal address, email, telephone number and Fax number. An invoice will be sent to you indicating the method of payment.

Other Publications

Other Europia Productions publications can be ordered from the address below. You always need to send your **Request for an Invoice** (preferably by email, Fax or letter) indicating details of your order and the quantities. Please provide your full name and initials, postal address, email and telephone number. An invoice will be sent to you indicating the total amount of your order, the cost of packing/postage and method of payment.

Europia Productions

15, avenue de Ségur, 75007 Paris, France

Telephone +33 1 4551 2607 / Fax +33 1 4551 2632

E-mail: ijdst@europia.fr URL: http://europia.org/ijdst/