Aspects of a narrative web of interactive art installations implemented to the urban space

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The paper presents a proposal for a project which aims at the revitalization of urban public space through the insertion of interactive art installations that construct a narrative web referring to historic events and legends. Thus, it presents a specific strategy for the attraction of attention and the avoidance of the neutrality and homogeneity of the global space, through the use of cutting edge technologies, local history and artistic creations.

A multidisciplinary international team of theorists, architects and artists from Schools of Greece and Spain, has been working in this investigation which is still in progress.

Digital technologies are inserted to the material architectural space, giving way to new hybrid spatialities that offer novel means of interaction between the subject and its environment. Transparent, three-dimensional, multisensorial scenes merge with conventional urban space, suggesting new augmented public spaces that change residents as well as visitors and tourists' perception of the city. A multiple-version story with references to the history, myths and legends of the specific place is told by the three-dimensional works. The purpose of the project is to revitalize the urban public space and attract high quality tourism through the reinforcement of the interactive relation between subject, events, history and urban environment. The construction of a narrative delimited web of transparent and almost invisible interactive technologies in the material space creates an amplified, intelligent environment that achieves the coexistence between past and present. Spectacular and thematization strategies are used in the creation of a multisensory, responsive, narrative environment engaging the visitor in an enriched somatic experience. The paper explores

certain factors concerning the implementation of this interactive web of art installations in the urban public space with the collaboration among different disciplines in the specific project.
Keywords: interactive, art, public, urban, story-telling

1 Short presentation of the proposal

The paper presents a proposal for a project which is being elaborated since 2007 and is still in progress and uses transparent technologies implemented in the urban space in order to tell a story with artistic interactive installations. It has evolved from a solely theoretical proposal to the object of a research program which will hopefully begin at the beginning of the year 2011.

The proposal has been developed by a multidisciplinary team whose members originate from different fields of research, such as architects, artists, art historians, computer engineers, film directors and philosophers, accomplishing the cooperation and exchange of academic material and knowledge. Most of the team members are architects and artists from Greece and Spain, who share common interest in the relationship of the work of art with space and the use of digital and interactive technologies. The purpose of the multidisciplinary team is to enable a concerted and complete confrontation of the urban environment for the creation of an additional immaterial level which is interfused and cooperates with the existing present situation of the public space without intervening in its materiality.

The proposal has been in the research field of the research team members since 2007. Specifically, Xenofon Bitsikas in collaboration with Polyxeni Mantzou, have addressed the issue as a theoretical proposal of insertion of interactive art installations in urban areas using transparent technologies and references on the past and the tradition of the place in which they are inserted and have elaborated scientific papers presented at three international congresses. In 2007, at the International Conference on Intelligent Environments 2007 in Ulm, Germany, they presented a paper entitled "Responsive Eventfull Public Spaces", in 2008, at the Mediacity Project Conference in Bauhaus-Weimar, Germany, they presented a paper entitled "Design Approaches for Interactive Public Spaces" and in 2009, at the City Futures Conference (International Congress City Futures in a Globalising World. International conference on globalism and urban change) in Madrid, Spain, they presented a paper entitled "New Hybrid Urban Spatialities". The progress of the research, as evidenced from the published scientific papers, is related to the development of the proposal and then to the identification and resolution of critical issues for both design and implementation.

The proposal combines, in a totally original way, art, technology, the city and its history, thus contributing to the progress of each field but also to the creation of new synapses between the fields. The activation of the open public space of the city through art installations that refer to its past, thus creating a palimpsest, contributes to the reinforcement of the relationship of the citizens with their city, the creation of greater social coherence and finally, the improvement of the quality of life. The proposal aims at a significant improvement of the perception and the experience of the public space of the city and also the attraction of a significant amount of tourism of high social level, without structural or difficult alterations. The superimposition of this immaterial palimpsest aims at the recuperation of the continuity of the city's history and

the opening of the public space to art and culture, making it a kind of open museum, which can renew its exhibits periodically.

2. References

The image and experience of the city changed with the construction of access axes, department stores, a spectacular form of advertising. The result, according to Simmel was the evoke of abhorrence, aversion and repulsion (Simmel, 1971), which led to the fact that the urban life is characterized by an intended lifestyle, the quick change of feelings, to the reduction of quality into quantity and to the fact that the man is obliged to seek the uniqueness and specificity (Simmel, 1971). As a result, residents of the cities are gradually transformed from participants in to social and cultural events into viewers-consumers, and public urban space loses its meaning as a space of meeting and exchanging experiences.

In modern times, through the use of special platforms the relationship of urban space and happenings taking place in it has changed significantly. From the flâneur and the blasé subject (Simmel, 1971), to the *wallpaper-person* and from the passing to empathy (Boyer,1996) and the theming of public space, there are important steps that have been challenged and gradually altered the underlying relationship of the person with the urban public space.

In the 50s and 60's, the reinvention and revitalization of the urban space has been the main goal of scientists, artists and architects among others. The Cobra Group, the Lettrists and Situationists, the "New Babylon" of Constant, the cities of Archigram etc are some examples of efforts that were made in order to bring out the potentialities of the urban space. In the case of the Situationists, their ultimate goal was to reconstruct the entire city, by *"constructing situations"*. Constructed situations would be ephemeral, without future. They would be some sort of performance, one that would treat all urban space as performance space and all people as performers. In this respect situationism postured as the ultimate development of 20th century experimental theater, the energies of which had been dedicated to the integration of players and audience, of performance space and spectator space, of theatrical experience and "real" experience (Sadler, 1998)

"The most pertinent revolutionary experiments in culture have sought to break the spectator's psychological identification with the hero so as to draw him into activity by provoking his capacities to revolutionize his own life." , Debord declared. (Debord,1991)

In addition, in the same period, in July 1955, a new theme park opened to the public and became the symbol of entertainment, the Disneyland world, which presents similarities to the Situationist's example, but is also clearly distinct as it separates the organizers from those who are organized, following the rules to which the situationsists were so directly opposed. The main goal of the Disneyland world is the fabrication of a sterilised, fairytale and controlled reality, does not operate upon the public space but offers a reflection, a mirror image of what appears as public, although obviously it is a kind of public life that you have to pay for. (Allen, Moore, 1978). The world that Disney offers is a consumption package. The user is aware of this fact, but is he is satisfied in this illusion as his centrality is crucial in the "script" and the guest appears as a spectator and as protagonist at the same time.

Although both examples rethink and reorganize the outdoor social interaction their philosophy is quite different. The situationists offer the reinvention of the everyday life and the public space while the Disneyland world offers a prepackaged product to be consumed by the user. The spectator is in the first case active and in the second case passive. The scenery in the Disneyland world does not refer to the real world, but to an ideal fantastic one. So while the situationists try to use the existing as a field of research and revitalization, in the case of Disneyland world another world is being constructed and in this new environment the "events" are foreseen and planed as consumption "scenes". Though the insertion of games that the subject invents in order to relate to the public space, are some of the experimental techniques used to emphasize the relationship between events, the environment and the participant. (Constant, Debord, 1958)

The city of the Situationists has been an inspiration for artists and intellectuals who experimented in the urban space. For instance the *"Narratives"* of Stalker Group and the *"Watercity"* of the artist Francesco Carreri construct a new urban map similar to the *psychgraphic maps* of the Situationists. The areas where the Stalkers intervene are the *non-places of* the big metropolis, the "terrae ingognite". Stalkers activate turban 'empty' space through the process of walking. The rate of the physical movement of the body defines the rate of the narrative. Stalker's fundamental thesis for their manifold interdisciplinary strategies is that architecture, as a solid mass, cannot "change as quickly as the community that lives within it". That is why they are pursuing the route of participative work with the residents in order to initiate a process that will produce an adaptive understanding of architecture and urban planning – through a community that is interested in their buildings and in the opportunities for adapting them.

If the Situationists and Stalkers write stories on the urban landscape with their own bodies, digital artists find stories by redefining relationships between users and the Internet infrastructure. The narrative is the key factor in all these artist efforts. The "Little People group", The "Waterlife" film of Kevin mc Mahon , The "Kubik" installation, etc are examples of "Storytelling" art interventions. In addition to those artist groups another significant group of artists and interactive installation artists based in technology and interaction methodology are working in the city using on one hand the "creation of atmosphere" and on the other hand the "creation of new materiality". For instance, the "White Noise white light" of Meejin Yoon or the "Minimaforms: memory cloud" of Theodore Spryropoulos as well as the "Blur Building" of Diller and Scofidio demonstrate that the city is not anymore perceived in the traditional way and is ultimately represented as a "flock". The atmosphere, with direct-form systems which, instead of pictures, create "ghosts" are described only by meta-data-relational algorithms which define the basic principles of composition and motion of this "flock".

The current interaction between the public urban space and "happenings" taking place in it may be better understood in the context of a long path connecting the relationship of the subject with the public space.

In the information age, following the pre-modernist city, where the spontaneous organization of events take place, the necessity of promoting and celebrating the special in the city

(Simmel, 1993) is attempted by the import of technology into the happenings of the urban space.

As the above mentioned examples show, it is clear that the reinvention of the urban space in the information age is being achieved with the use of technologies. New mixed environments are being created where the digital technologies and the conventional material architecture are assimilated in order to produce multi-leveled human-computer interaction platforms. (Mitchell,1999). The input of interactive digital technologies in the public space aims at the revitalization of the urban space. Several theoretical as well as realized projects research this field in order to re-create the urban space as an interaction field. The Urban Probes Project of the Intel's Urban Atmospheres Berkley in California (Eric Paulos) introduces a rapid adoption of Bluetooth mobile devices, tiny ad hoc sensor networks, and the widespread influence of wireless technologies across growing urban landscapes. The Digital street game, of the Intel's People and Practices Lab in Hillsboro proposes a hybrid game as a research tool to explore new approaches to computing in public space while bringing the challenges inherent to designing for online/offline experience to the forefront. The team claims that while work, commerce and business are the focus of cities, it is also a place for individuals and communities- a place where people can play. The potential for sociable exchange is vast. For its workers, the city also provides leisure zones-what Foucault calls "sites of temporary relaxation" (Foucault, 1998). The Shape (University of Limerick's Interaction Design Centre) is devoted to understanding, developing and evaluating room-sized assemblies of hybrid, mixed reality artifacts in public places. Hybrid artifacts exhibit physical and digital features and can exist in both physical and digital worlds. They combine interactive visual and sonic material with physically present manipulable devices. The general design concept of the Digital Mile (MIT Media Lab) is to link physical and digital frameworks into a network of facilities and public spaces that can be used for multiple community and educational purposes.

It is obvious that digital interactive technology is an actuator that strengthens the intent in each case, while incorporating specific characteristics of the technology. In all studies that are mentioned above the technological means are used in a way to provoke the citizen not only to use the public space, but also to arrogate it. The urban space is the appropriate field for the insertion of such *"constructed"* technological constructions in order to evoke the user and animate the everyday quotidian realm (Mitchell,1999). This is one of the main characteristics of the proposal as well. The digital technologies interweaved to the urban space and almost invisible to the naked eye, create a web of event points so that a story can be told, a story that depends a lot on the way the visitor interacts with the environment. So, the narration becomes a significant part of the design, the parameter of time and duration develops into an additional aspect that is essential in the planning process (Hoelscher, Tuan, 1997). The main goal of the proposed project is the interaction of the visitor to the characteristics of the city that are "narrated". These characteristics such as history, legends etc cannot been seen or experienced in the everyday-life of the city. The proposal has in this way also an educational character. The world to which the user is being transferred by the installations is neither real (situationists) nor fake (Disneyland). It is a projection of the traditional oral-stories of the past

into the present physical urban space. The mentioned examples constitute a research framework the authors of the proposal will take into consideration in order to establish the methodology of the proposed project.

3. Organization of the research proposal

This project inserts responsive environments enriched with interactive art installations to the urban space which is augmented by the construction of narration strategies.

The research for the preparation of the implementation of the proposal is realized through the collaboration of three interdisciplinary research teams: the Research team A - University of Ioannina (School of Art and Art Sciences), the Research team B - Democritus University of Thrace (School of Architecture) and the Research team C - School of Fine Arts. The duration of the research is calculated to 36 months.

The project has been divided into six chapters which correspond to six work packages. The first work package concerns the field research, the second one consists of the theoretical structure of the proposal, the third work package realize a case study in the city of Ioannina, the fourth one concerns the conclusions on the actual implementation of this model in different urban landscapes, the fifth one deals with the dissemination of results and the sixth and last work package deals with the coordination of the Research Teams and supervise the physical and financial progress of the subproject.

More specifically, the first work package deals with the field research, is divided into four actions, involves the three research teams and consists of an introduction to the project, conducting field and bibliography research of the elements directly related to the urban, visual art, interactive and narrative nature of the proposal. The actions issues of this work package concern the urban space and events realized in it by categorizing them through theoretical approaches and practical applications and analyzing and evaluating examples of artistic characteristics and cultural practices. Then, around the relation between artwork and viewer, is attempted the approximation of this relation through history, a classification based on the spatial-temporal dimension of this relation and the analysis and evaluation of art works. Finally, in the field of interactive art events in urban space, is realized the study of historical retrospection and development of interactive artistic events in public urban space through examples of artistic movements, artists and technology applications and their categorization through theoretical approaches and practical applications, analyzing and evaluating events, but also examples of similar projects.

The second work package deals with the theoretical structure of the proposal, is divided into seven actions, involves the three research teams and attempts to approach the theory of a model of interactive environment of narrative art installations through the systematization of its structural characteristics for its easier adaptation to the characteristics of any urban space. In the actions of this work package are included the issue of memories of reading and processing mechanisms of the city, in a way that they affect and determine the reading and forms of interventions in it by charging and distorting its image through the historical or mythical data. In relation to the issue of construction of virtual spaces through the narration and the scenario as a programming tool for architecture, is realized an investigation around

the composition of architectural space based on the event, through writings and projects of architects and also constructed places through the narration and scenario. The scenario in two examples of "urban" spaces: Disneyland and Situationists, is another issue which is analyzed in order to find a methodological tool for the construction of situations in the narrative environment of the proposal. Staying in a narrative framework, are then investigated artworks of open scenarios of multiple versions and webs of interactive installations.

The third work package concerns the case study in the city of Ioannina, is divided into seven actions and involves all three research teams. After detailing and thorough investigation by the actions of the packages already mentioned, a zone is selected in a small city in northwestern Greece, the city of Ioannina, which will represent the way in which this proposal could be implemented. The actions here present the analysis of the modal characteristics of the city of Ioannina through the research of its historical background, points of interest and the production of a web of such points. Then, are following the design and development of the project actions, relating to the writing of the scenario and narration, to art installations, to the integration of the installations at the points of interest and to hardware-software issues. They also concern the investigation of the technical characteristics of digital applications.

The fourth work package concerns the conclusions about the real implementation of the proposed model in different urban landscapes, divided into five actions, involves the three teams, and proceeds to conclusions for the real implementation of the model in different urban landscapes. The actions in this work package consist of the evaluation of the case study and more specifically of modifications to the narration - scenario, to the integration of installations in the urban space, modifications to the design of the installations and digital applications and the definition of urban spaces appropriate for the implementation of the model.

The fifth work package deals with the dissemination of the results, is divided into five actions and involves the three research teams. Within this package is organized a series of workshops, whose responsibility is each time on a different team, in order to allow multiple opinions on the same topic. Both the participating researchers and other participants associated with the research should negotiate theoretical results and use them as a starting point for the work that will be done in the workshop. In this package is also included the publication of the scientific material. As it already has been clear, the actions here focus on the organization of workshops and the publication of the scientific material. The workshops are a very important factor for the research as they allow the meeting between theory and practice, model and application. Interdisciplinary, interaction and collaboration which are imposed by the structure of the workshop are particularly useful for the proposed research involving different fields at a final result. The time condensation and physical commingling of the participants are also positive factors that promote the development of the research, especially in cases of inter-university collaborations of long duration.

The sixth and final work package concerns the proposal coordinator and responsible of the research team A, deals with the coordination of the Research teams and supervise the physical and financial progress of the sub-project, the content, timing and ultimate objectives.

Is divided into four actions. During these actions is realized the supervision of the work done in the first, second, third, fourth and fifth work package and also the overall assessment of the proposed research by completing the final report of the project.

4 Case study presentation

The case study of the project, which is set to be realized in the city of Ioannina, a historic city located in the north-western part of Greece, develops in separate actions, which organize the methodology for the completion of the project. The main objective of the project is the revitalization of public urban space and the re-evaluation and enrichment of the relationship between subject, incidents, history and urban environment. The project consists of a web of interactive installations, which is placed at the historic sites of interest which engage the visitor in a sequence of narratives that concerns the local myths, historical facts and legends. The story that is told with the use of interactive technologies is superimposed to the public material environment and it is not limited to a confined material space in the city. The construction of a narration that connects past with present and directs historical facts, traditions and legends, through an artistically directed re-interpretation, is interwoven with the use of transparent and almost invisible interactive technologies in the material space. The proposal is based on the fusion between exterior, material, public space and digital, interactive technologies.

The chosen city of Ioannina, assembles a group of features that render, a particular region, suitable to act as the scenery of the proposal. The chosen region includes the historic castle, the lake and the small island located in the lake. Furthermore, the city of Ioannina is considered suitable for its important historic references and natural beauty, as for constituting a node in main road axes, which will facilitate the attraction of tourism. Additional factor in the proposal is the function of the Department of Fine Art and Art Sciences, as well as the Department of Information Technology that are held at the University of Ioannina, but also the programmed function of the School of Architecture, that can support the research for the preparation for the implementation of the proposal.

The proposal questions the relation between incidents and urban spaces and creates a theoretical model that would allow the successful integration of figurative interactive incidents in urban spaces. For the theoretical model to be tested and allow for further corrections and renegotiations, it is aimed to be applied in real data. The objective of this process is the production of a final model, which primarily, produces a mesh of figurative interactive incidents in public urban spaces and which model can be used to be adapted in different territorial and social conditions.

The totality of the installations constitutes a web of prefabricated multi-sensory incidents that are interwoven with the material environment and activated by the presence or the mobility of visitors. The incidents are not only audiovisual appearances, but can also include the entanglement of smells, the activation of some movement in material objects, the creation of currents of air, the incorporation of animation scenes that can become visible through a window or a door that opens lightly, etc.

While the objective of the proposal is to mix the natural environment with the appliances of

projection, the technology on which it is based is supposed to be, as much as possible, less obvious and easy to use. Particular attention is given to the fusion of digital and analogical elements that render possible an enriched somatic perception of manufactured scenes, since the visitor is not a spectator but the protagonist. The visitors at their entry in the place of the project receive a hand activator that allows the system to record where they are found and from where they have passed and what they have experienced. Simultaneously, a map of the selected region is given to them that shows certain selected routes that they can follow, but does not contain information regarding the sites where the interactive technologies are placed. As they leave the place of the project, visitors can take with them a memorial brochure - guide with maps and images of the project and a dvd which contains the project in a form of a game. They can also have access to digital material concerning the project before their visit. The sense of preparation and continuity is considered especially important for the visitor, for they contribute to the enrichment of this experience and charge it with an almost ritual character.

Referring to the design of the project the development of hardware systems and applications software that will be applied in the project is considered essential. The software applications will combine multimedia and databases in order to support the visitor's trace and his experience in each incident and on the other hand the hardware systems will support the application of video projectors, sound equipment, sensors for the detection of movement and wireless network.

The innovativeness of the proposal lies in the fact that it is a completely applicable and realizable project, α similar of which hasn't been recorded in the international bibliography, while it combines a series of data that concern the coexistence of urban web, history and tradition, transparent interactive multisensory technologies and figurative installations that narrate a multiple versions scenario.

5. Conclusions

One of the most important features of the proposal is the cooperation of different interdisciplinary teams in all of its phases. The cooperation creates a web of collaborators from different fields of knowledge that offers the capability of creating new synapses and axis of progress for each of the fields but also for all of them as a common context. The interdisciplinary teams have common scientific interests and have worked together and interacted in the past, creating an innovative, creative and productive scientific web. There are collaborations in research groups and research programs, collaborations in the organization of workshops and in the participation in conferences and scientific journals with publications. This web of collaborators is depended on their common scientific interests and the confirmed good communication between them. The origin of the collaborations is mainly the academic field and the common research interests.

The research for the preparation of the implementation of the proposed project is necessary in order to explore the possibilities of the project to contribute to the effective protection and exploitation of the rich natural and human made environment, like in the example of the case study, of the Epirus region, in the capital of which it is proposed to be implemented. The

Epirus region is one of the less developed regions of both Greece and Europe, promoting sustainable development activities. In the city of Ioannina, the implementation of the proposed project would contribute significantly to the artistic reinterpretation of its rich cultural and historical background, to the activation of urban space and also to the attraction of a large number of visitors and high quality tourism, as it increases the places of touristic interest and offers a more attractive touristic identity. The combination, through the implementation of the proposal, of cultural product, augmented, interactive, transparent technologies and narration can provide a very attractive touristic site of high standards and wide acceptance.

The expected results of the proposed research, aim to increase competitiveness at regional, national and European level, by creating an interdisciplinary and inter-university structure. Increased competitiveness positively affects all areas of the University of Ioannina (educational, research, administrative activities), creating appropriate conditions for increased research collaborations at both national and international level, for attraction of new resources, for the overall strengthening and support of research, for creating new opportunities for integration into the labor market of young scientists and artists, and finally for the reduction of the tendency for internal or external scientific migration.

Keeping young people in the periphery creates conditions for the reinforcement of the peripheral economic development since the general resource input and the productive activity in contemporary scientific and technological fields are reinforced. Furthermore, given that the cities of the periphery are often detached from the artistic activity of the big cities, the proposal can constitute a significant starting point for the restoration of the periphery through advanced artistic activity.

The project furthermore, consists in a constantly renewable proposal that can substantially function as a work-frame for a continuous research for the planning and the production of independent parts of a collective web of interactive installations. Moreover, the fact that these installations make use of multimedia and transparent interactive technologies ensures the interplay and the collaboration, in research as well as production, between artists, technology experts and other techniques that form the research groups of the project.

The project, finally, raises the possibility of producing thorough research on art, architecture and technology issues, working in favor of the decentralization of cultural and technological research structures and increasing high level research in the less developed areas of the periphery.

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