

Gwangbok Project: Rationale

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The following is the original text of the explanatory rationale accompanying the drawings for the Gwangbok Street project, - the International Idea Competition on Urban Design "Revitalization of Gwangbok Street and PIFF Plaza" at Busan city, South Korea, 2005 (Souza 2005).

Introduction

In order to design improvements to Gwangbok Street, this proposal took into consideration some theoretical frameworks in order to analyse the site, which are presented in the section entitled "Analysis". The section "Problems" describes the main issues that have led to the proposed solution. The conclusion presents some ideas and concepts that have dictated the design solution.

1. Analysis:

Identifying problems without employing layered methodology is almost impossible. According to Rapoport (1977), relations of congruency or conflict between physical forms (both visible and concrete), social forms and cultural forms can contribute to an understanding of the environment. Therefore, Rapoport considers the correlation between the multiplicities of concepts about space and simultaneously tries to find a model with which to understand the physical, the social and the cultural environment with the support of other fields of knowledge (Psychology, Sociology, Economics etc). His theory encompasses concepts of human forms (actions people take in order to cope with life's activities) regarded as a process of dynamic and continuous adjustment between them and the territory under consideration. These relations are organized into patterns, which he calls 'ordinations'. Thus, the analysis of an 'ordination' can reveal the arrangements of the physical, social and cultural forms in terms of the extent to which they either conflict or cohere with each other.

Four 'ordinations' are used to analyze social organization and spatial forms in Gwangbok Street: 'spatial ordination', 'meaning ordination', 'temporal ordination' and 'communicational ordination'. We also noticed the relationship between these four ordinations, which is not only layered but also connected. As such it could be possible to determine a "root" (or vital) problem by means of the analysis of this relationship.

1.1. Spatial ordination

The term 'spatial ordination' refers to the physical fabric of a territory, the formal patterns that belong to the public realm, including symbolic properties. This ordination achieves its quality as a result of the topological properties of the individual elements, which present the relational meanings and hierarchies of importance across the territory (e.g., streets, squares, lanes and other topological entities that strongly express the configurational qualities of the form). Hence, the relational properties of the physical elements (proximity, distance, contiguity, separation, laterality or elevation) are more important than geometrical patterns in the environment when it comes to generating this ordination.

As far as the analysis of Gwangbok Street in terms of its position and geometrical relationship with the whole site was concerned, it was possible to deduce the strong formal influence of the occluded side (see number 1, Figure 1) near Mount Yong Dusan, which provides a barrier (see number 2, Figure 1) and forms a natural path that starts sloping down from that point, with the effect that all the streets and lanes in the area are markedly 'ramped'. This phenomenon is significant in that it breaks down the perception that this is actually a place in a continuous sense. There, the space is possibly understood as an enclosure near the mount. On the other hand, the geometrical analyses show that the street is a natural roaming around the mount, formed in a perpendicular direction from the top. An analysis of the documents provided by the Contest organiser shows the historical process by which the street has been settled across time, and from this it is clear that the street's space has always been observed and visually surveyed

from the top. Indeed, only the direction from the shore provides a natural alternative as far as easy access to the street is concerned, as those directions are not affected by the natural declivity of the mount (see number 5, Figure 1).

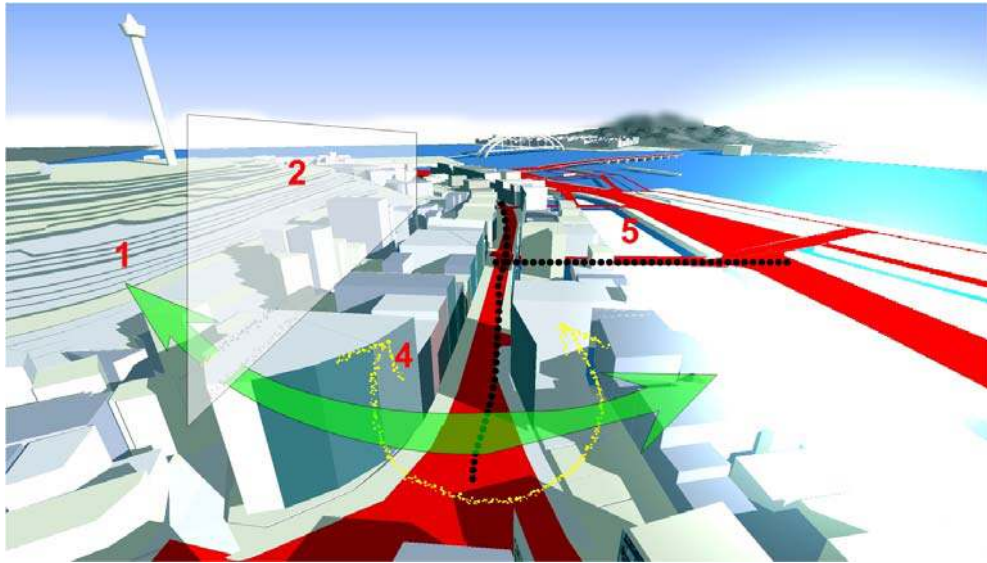


Figure 1: Analysis of the geometrical/morphological situation

That analysis is reinforced by the conclusion concerning the ‘ordination of meanings’, which has insured that the enclosure of the street, with the course of time, became more and more closed, thus increasing the sense of claustrophobia in the place (see number 4, Figure 1). Therefore, the continuity of ‘*place perceptions*’ in Gwangbok Street is broken up by those factors, thus detaching the street from the whole environment, mainly by means of a reduction of the visual connections that play a fundamental role as ‘identity agents’ in the place. Thus, neither the ocean nor Mount Yongdusan are visualized by a person in that street, as the heights of the buildings block both panoramic views.



Figure 2: Aterro do Flamengo, at Rio de Janeiro, Brazil. A strong presence of the landscape's image is maintained through the use of lights to illuminate Mount Corcovado, thus shaping its presence at night. The closest streets sometimes permit both the mountain and the ocean to be seen. This provides both the street and the whole city with a strong sense of identity.



Figure 3: Sao Clemente Street in Rio de Janeiro. The facades do not entirely block the view, and Mount Corcovado appears as a landmark. This natural feature, beyond contributing to the local identity, permits easy locomotion over the territory as orientation is equally easy.

This is not a trivial fact but rather a strong characteristic of the spatial ordination of the place. Others streets with the similar geometrical conditions to Gwangbok Street drawn their main source of identity from the surrounding landscape, as in the cases, for example, of streets in Copacabana and Aterro do Flamengo, and neighbourhoods in Rio de Janeiro, Brazil (Figure 2 and Figure 3).

With regard to its relative position, Gwanbok Street shares social and cultural centrality with Mount YongDusan (Figure 4), but the terrain itself blocks the links with the surroundings. Therefore, it is possible to understand the site as a central point circled by Jagalchi Market area, Gukje Market area, Daegak Temple area, Busan Modern History museum and the Busan Movie Experience Museum areas, all of which areas were mentioned by the Contest organizer as important areas connected to life in Gwangbok Street. The lack of those links seems to have been a contributing factor in diminishing the local identity, thus affecting the quality of both commercial and social areas: however close Gwangbok is to those places, a straight link can only mean a connection made by means of walking, without any gradation in between made by means of visual or other sensory changes.

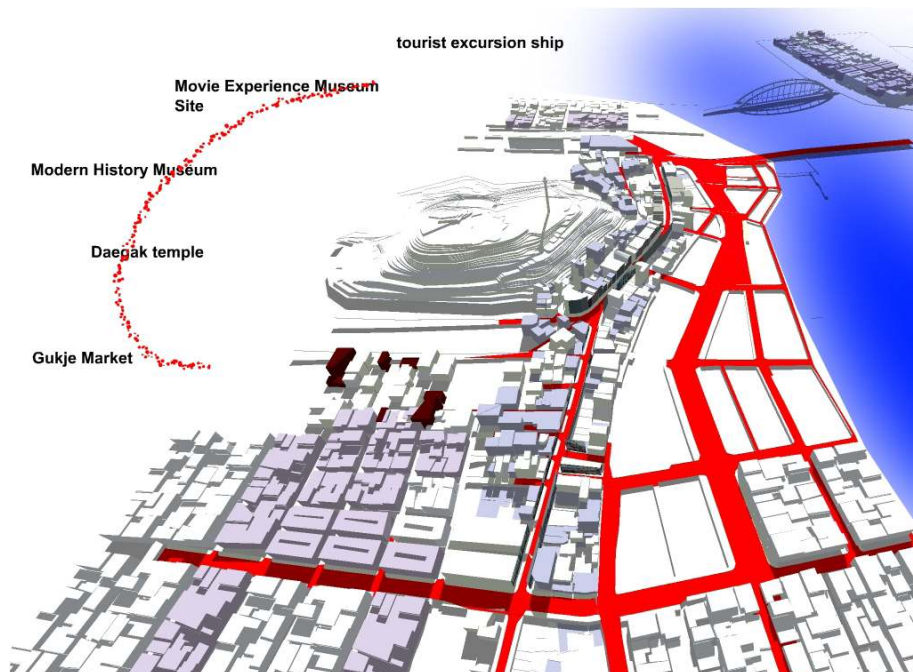


Figure 4: the socio-cultural belt of Gwangbok Street.

1.2. Ordination of meanings

This refers to the material, shapes, colours, details of materials and forms, iconic aspects of the buildings and of the environment. This ordination corresponds to the subjective value conferred by the community on their physical environment, referring to the cultural patterns as a source of the materials' meanings. For instance, each material (gold, stone, wood) is understood as having a cultural meaning with collective value attributed to it and occupies an important position in the general meaning of the place.

In Gwangbok Street, the surfaces of some materials are printed with literature concerning issues of local and national cultural life. For example, in that street there are pavements hand-printed by artists, whereby all the importance and significance of the Cinema's Festival of Busan is transmitted. But more than this, the whole of the street is covered with a wide variety of materials, some of which lack any relation to the local context. This situation came about because of the influence of contemporary tastes regarding the decoration of commercial buildings, and it seems to be more about thrilling customers; it has little to do with the assumptions of Modern or Contemporary Architecture. Like others parts of modern cities which developed within the context of increasingly complex links between activities and people, this issue in Gwangbok seems to be getting out of control. Thus, this condition generates a certain chaotic aspect and a lack of identity despite the fact that the street is a historical urban place. In short, none of the buildings reflects the past or Busan's history. However, modifying the facades or imposing on them in order to achieve a designed condition and controlling its diversity, merely wastes the power of the complex and the rich expression of order in people's lives, which means expressing the best qualities of social living in terms of different shapes, functions, and lifestyles. In addition, as will be seen below, bringing the facades into conformity by means of standardization seems to be a matter of merely coping with the *appearance* of those complex relations, instead regarding it as a totality that encompasses the continuous and dynamic regulation of people and the environment. Whereas Alexander (1979) points out that the attempt to build an external appearance is

actually to adopt a position that ruins the quality of places, and Castells (2000) sees it as a way of remedying a lack of identity by embedding places in a complex web of fluxes, Glanville (2000) discusses the issue in terms of the management of systems of information. All these authors agree that the key point is not a question of ruling over the shape or appearance, but rather of deeply understanding the mechanisms by which influences are exchanged in the environment. To the extent that it can be related to particular design decisions, this point represents an issue that is more than merely circumstantial or political: it is related to the extent to which interaction between people and the environment itself is possible. The facades of Gwangbok Street could amount to an original and complex expression of identity related to contemporary life, guarding the efficiency and utility of the materials. With respect to formulating new ways of communicating and advertising in a place, new ideas concerning interaction between the activities in the street need to be considered.

Gwangbok displays a strong level of organization in terms of other icons, and this is depicted by the existing urban furniture and others elements and facilities. Thus, the analysis using pictures did not show any serious conflict between users and those elements, as they were neither missing nor malfunctioning. Therefore, a new design for the area will take account of the need to reinforce its character and will only demand minimal changes to those elements.

1.3. Ordination of time

This refers to temporal cycles (i.e. the rhythms of the activities that separate day from night) and the overall emphasis placed on the calendar and the seasons. It integrates the individual perception of the passage of time passing to the collective, configuring a suitable (or not, in the case of conflicts) division of space in terms of time. In this way it separates out the activities in the territory with respect to the cycles of time and the relative position of the people in time and space.

Plenty data was delivered concerning Gwangbok Street. We consider, however, the most traditional issue concerning time in contemporary places, which is the difference between day-time and night-time occupation. With this in mind, we have increased the level of activity in the street by means of the adjustment of opening hours, thus providing an opportunity for the transformation of Gwangbok Street into a 24 hour commercial area.

1.4. Ordination of communication

This encompasses all the methods people use to communicate with each other, including both the use of verbal and ‘non-verbal’ languages, and the devices they use (or don’t, as the case may be) to help them do so. It reports the flux of information across the region and the way each message can cross the areas and implement both various and useful functions, such as, for instance, individual orientation among the places and collective identification within one specific place.

The facades in Gwangbok can be seen as a kind of communication process and thus it could be said they constitute a system of information, which plays a fundamental role in the local identity. The main issue here is the chaos that results that from the colours, lights and materials in the displays. Thus, it claims to constitute an efficient control system, fulfilling a missing visual programme; but regarded as a communication system, the relation between private ads and displays and welfare in public space cannot be solved by means of a clichéd solution, as mentioned before.

The connection between Gwangbok Street and its cultural-belt (Figure 4) is another problem requiring solution; a somewhat clichéd correction to this problem consists of spreading regular signboards with the aim of orienting people through the territory, as it happens to be nowadays. However, those signs, in conjunction with the proliferation of information broadcasted over the surfaces of the street enclosure, can only result in a ‘weak’ information process.

There is a mixture of both formal and informal timetables that control and regulate the events that take place in the environs of Gwangbok Street all year round. Since that timetable determines the presence of the public on the street, people need to know every change or adjustment in it, thus improving the organization of time by means of an efficient system of communication. Moreover, commercial buildings continuously demand changes in the way that they attempt to grasp the attention of the public, and in those cases, communication processes need to consider the complexity required in order to guarantee efficiency.

2. Problems

This section presents the idea at the centre of this proposal, describing the problems identified in Gwangbok Street and respective design solutions. Accordingly, the place was analyzed with due consideration given to the four main attributes of architectural space: territoriality, privacy, ambience and identity.

2.1. Main problems related to territoriality

‘Territoriality’ refers to the limits between the entities in the space, and all related devices, tactics and codes governing the co-existence of a huge diversity of limits. The first related problem concerned illegal parking in the street, which was both a source of obstruction and led to the presence of pedestrian traffic on the car path itself, thus indicating a conflict between cars and pedestrians. The suggested solution is surveillance in order to prevent illegal parking, and the possible transformation of Gwangbok into a pedestrianized area. Service parking spaces are provided for in the new design, but the presence of cars in the street is going to be gradually reduced. Car path marks are indicated on the ground in order to delimit and define the area used by cars.

Another problem is the lack of identifiable territories indicated on both the floor and the space (canopies), marking the transition between indoor and outdoor activities. In order to attenuate this, the design of the pavement is purposely designed with organic and curved shapes in mind, suggesting support from both ephemeral and minor uses as well as the transient and integrated activities that take place in the street such as presentations, carnivals, marches and parades.

2.2. Main problems related to privacy

Privacy 'conflicts' come about because of the inadequate regulation of interpersonal exchanges; and thus this issue comprehends both the private and public domain and the myriad activities of everyday life. Normally those conflicts demand changes in acoustic or visual attributes; it is a matter of adjusting levels of visibility or audibility i.e. showing things or hiding them, allowing them to be heard or muffling sounds. Furthermore, we understand that activities separated temporally could provide a solution to the possible conflicts, for example by separating public manifest from quotidian activities by means of a timetable that could be drawn up with the agreement of shopkeepers and the accredited representatives of the city authorities.

2.3. Main problems related to ambience

Ambience is related to comfort and the way in which it is possible to maintain the space. So, in order to maintain a high level of ambience, we decided on using materials that were both easy to clear and strong enough for public usage, such as Dolomite for the ground. Bins for litter disposal, with a pattern selected by the City Council will be available in the street. The design of elementary urban furniture, in this proposal, is consciously deemed to be a subordinate and secondary issue in order to avoid the excessive expense of implementing banal and hackneyed solutions, as they normally require the expenditure of too much

money when the pieces are conceived of as ‘tailor-made’ and specifically designed for use in a particular place. At same time, we took into account the positive experiences of other cities, for instance, those of the United Kingdom, where urban appliances and furniture are always the same, no matter where they are located in the country. In this way it is possible to reinforce the usage of these features and transform them into ‘customary’ equipment and thus preserve a degree of recognizable utility, rather than using urban furniture and others small details to encapsulate the main idea of the new urban design drawn up for Gwangbok.

2.4. Main problems related to identity

This, more or less, represents the biggest problem to be solved by the proposed design solution, and it corresponds to the absence of the kind of particularities that would contribute to the ‘uniqueness’ of the space in Gwangbok Street and thus transform it into a ‘place’. This problem is probably a consequence of the internationalization of urban patterns that has taken place without reference to the local culture, and which is reflected everywhere, in facades, displays, shapes and forms of buildings. In addition, there is the aim of addressing Gwangbok Street as a pole of culture and tourism, and thereby linking its activities to those developed in the cultural belt.

On the one hand, as a result of the expression of a wide variety of minor private interests in the public space, for example, in the firm of sign-boards, ads and other features, the complex system of information can nowadays present a somewhat chaotic aspect. This results in a weak and unrecognizable identity and causes a kind of collective disordered perception (Agnew 1971), which in turn interferes with other qualities of space, such as ambience and territoriality, by means of which people are willing to maintain, preserve and recognize areas. The commercial sector, in its effort to stay connected to external influences (Castells 2004) necessary for the process of exchanging goods and services, fails to

maintain local references in the space and the activities. On the other hand, people do not recognize the place as a continuum of their lived space and the experience of the street itself starts to become rather abstract.

3. Conclusion: Tuning and refining the unmanageable Gwangbok Street

The previous analysis has pointed towards a single root problem: this site lacks local identity; it is this problem which is the source of the extraneous interferences with the other spatial qualities. Therefore, in order to make a decision on this key issue, we must start by generating a design hypothesis; only then can we proceed to a series of refutations in order to test the suitability of the analysis that has been drawn-up.

Rules (Strategy) of design

On the basis of the analysis, three rules were established in order to direct the enquiry into the solution to the problem:

- Only structures related to the local identity should be constructed. Since we realized that the site would be subject to continuous change over the course of time, giving the site a fixed face or heavily reconstructing would not be likely to help. On the contrary, limiting the use of structures that related directly to the local identity by as much as possible will give suggestions for the following building activities.
- As far as the site is concerned, night-time is more important than day-time. There is no solution that is able to satisfy all the aspects of a complex system. As the site is highly related to the entertainment industry, we believe that a solution that satisfies the requirements of activities taking place at night is better than one that is tailored for day-time ones.

- Continuous research should be conducted in order to keep the design up to date.

Discussion of the solution

We have generated seven design solutions applicable to the entire area of Gwangbok Street, from which main ideas have been refuted, either because they focussed too much on small details, such as the use urban furniture for granting the area its 'uniqueness', or because they required the intensive removal of buildings and existing spaces.

In the course of developing the solution into one that looks for 'place identity', the phenomenon of the abstract perception of the space, referred in the previous section emerged as one that could be seen to be related to the alienation process in cities spaces, which isolates people both on the inside - in highly predictable and mono-functional spaces – and on the outside - in predictable and public spaces that fail to stimulate. So, the main point of our proposal is to control communication between private and public sectors, individual and collective life, generic and unique solutions, and manage the communication between each constituent part. We have looked at control as something circular, not linear. As such, the solution will amount to a form of tuning that takes place between the controlling and the controlled systems. According to Glanville (2000), if systems are of a certain variety and complexity then it is inconceivable that we can satisfy the Law of Requisite Variety and thus properly control them; we must, therefore, regard them as unmanageable.

When a system is unmanageable, we have three options: to reduce complexity, to change the organisational structure (how control operates), and to alter our attitude to unmanageability. The aspect of the design solution for Gwangbok related to the first option was a simplified functional design of the urban space, establishing zones and specifying their elements. The option concerning a change in the controls, meanwhile, was dealt with by establishing new ways for people

to interact with the street, thus achieving a recognizable identity. Lastly, the design solution concerned with the third option was to include a Research Centre which would continually new solutions to the problems involved with interaction using Information Technologies devices on Gwangbok Street. This centre would be based inside towers to be placed in 4 areas along the street.

According to McCullough (2004), the principles of interaction in the design are: know when to eliminate an obsolete “legacy” operation, when to automate, and when to assist an action. In others words, we should know how to ‘empower’, not how to ‘overwhelm’. In order to ensure that each of these cases is recognised, we are proposing an organizational structure that works alongside the physical one. Therefore, the solution involves not just an understanding of physical elements, but an Idea of how to maintain and implement their use.

Our project consists of eight movable gadgets. Each gadget, termed here “Robots”, includes 1 Laser projector, 1 display message board, 2 big screen televisions, 2 video cameras, and 3 of IBM’s Everywhere projectors.

The aim of utilising laser projectors is to produce special visual effects in exhibitions and parades at night-time. The luminous message-board broadcasts news about the activities in the street and its vicinity, information about local museums, events and so on. The television screens allow small clips, ads, footage of the place, real time sequences, and so on, to be watched. The video cameras gather material to be mastered and then broadcast via the Robots. The IBM Everywhere projector combines projection with detection on an arbitrary surface such as a wall or the simple pavement. In this way the ground and walls become interactive, in effect, turning the surface into a crude wireless touch screen.

Each Robot moves under rails over the street sustained by 34 structural portals. The Robots are made of structural aluminium and a modelled polycarbonate. Moveable canopies can be adjusted by distance to protect the screens. This gadget is controlled by the Interaction Research Centre, situated inside the 4 towers along Gwangbok Street. But the interaction, position, movement and

lights of the Robot can be modified by users accessing and interacting with an internet web site.

When the Busan International Film Festival is being held, or when otherwise required, the Robot can broadcast information, ads, clips, games and quizzes about the movies exhibited, interacting with the public and attracting their attention. Furthermore, the ability of these robots to cope with images is in congruence with the idea of the moving image; this idea is inherent in cinema, and in this way this innovation is able to enhance the sense of local 'identity' in the street, since the museum of cinema in Busan is one of the areas key attractions (if not the key attraction).

Nevertheless, in order to act as a pervasive mechanism for declaring, representing, and querying the physical relationship between people, places, devices, and things, the Robot needs to be supported by an ongoing research project.

The Interaction Research Centre is an organization whose main preoccupation is designing, experimenting with and maintaining systems, software and hardware, in order to produce improvements in the interactive urban devices used at Gwangbok Street. It will cope with ubiquitous computing solutions at Gwangbok Street on a daily basis, possibly being the first centre concerned with this subject to be located in the very field of research itself. This idea was inspired by the argument propounded by Steve Shafer of Microsoft Research in his article "Ten Dimension of Ubiquitous Computing" (Shafer 1999). He stated that interactive 'tuning' is central to the 'knowledge representation' problems of the emerging generation of research. According to him, the main question for research nowadays is: how can we make the interactions between devices and people meaningful? The same question was posed by McCullough (2004):

"In contrast to a sense of place, consider places with senses. Smart spaces recognize at least something about what is going on in them, and they respond. Some of this built-in understanding now can reside in easily

adaptable software, some can be implicit in occasionally reconfigurable arrangements of furniture like hardware, and some remains better off being built in. It is the interrelationship of these that needs design” (p.93)

So, the Research Centre is also concerned with implementing and ‘tuning’ the interactive devices deployed in Gwangbok Street. This ‘tuning’ is based on the incremental adaptation of configurations and settings based on a qualitative, top level interpretation of performance. In other words, ‘tuning’ takes into account incremental growth and change. However, there are a number of questions that need to be addressed: How are new devices added? What model underlies the world in which all of these interoperate? Must the whole system be rebalanced each time it incorporates another element? So, if we project into the future, Gwangbok Street could end up having many specific devices and services, such as wearable locators for people, child-care aids, disability applications, intelligent urban appliances, survey systems for the shops, BBS exposed in open spaces, and other public utility services supported by both located and remote devices.

Rather than just introducing a kind of “push-button” level of interaction, the Research Centre needs to translate the power of tuned interactions into the Gwangbok urban space by means of creative contextual developed widgets (all the time taking into account privacy and other policy considerations). In short, our idea of interaction here is to design devices which make a claim to the actuation of the whole user body, so the Research Centre needs to specialize in ergonomic interfaces and haptics technology.

The portal includes the streetlights and a luminous vertical message board which is made of painted steel. Since these look like gates - and more emphatically are to be used at night - we suggest giving the name “Gates of the Moon” to the portals. Gates and shapes on the ground will alleviate the tedious ambience produced by the chaotic scenery of contemporary city-scapes, and with the introduction of those interactive elements, we anticipate the emergence of new deals between shopkeepers, whilst the Research Centre will engage in redesign in order to improve facades and incorporate those features.

One last point of our proposal involved removing a building in order to generate an open space near the Piff Plaza. This presents us with an opportunity to maintain both an unbroken continuity with Gwangbok Street and the view. For that reason, the design considers the inclusion of symmetrical lamps in order to mark 'solemnities' in the square, such as those related to the festival. A very simple design was suggested so as not to interfere in the spontaneous use of space. Therefore, we suggest using Piff Plaza to present a continuous programme of arts and artistic exhibitions related to the use and processing of images, such as those carried out by Rafael Lozano-Hemmer (Lozano-Hemmer 2005).

Images

The following are copies of the four A1 sheets sent by the architects to Busan City Council, South Korea, 2005, in response to the competition "Revitalization of Gwangbok Street and PIFF Plaza".

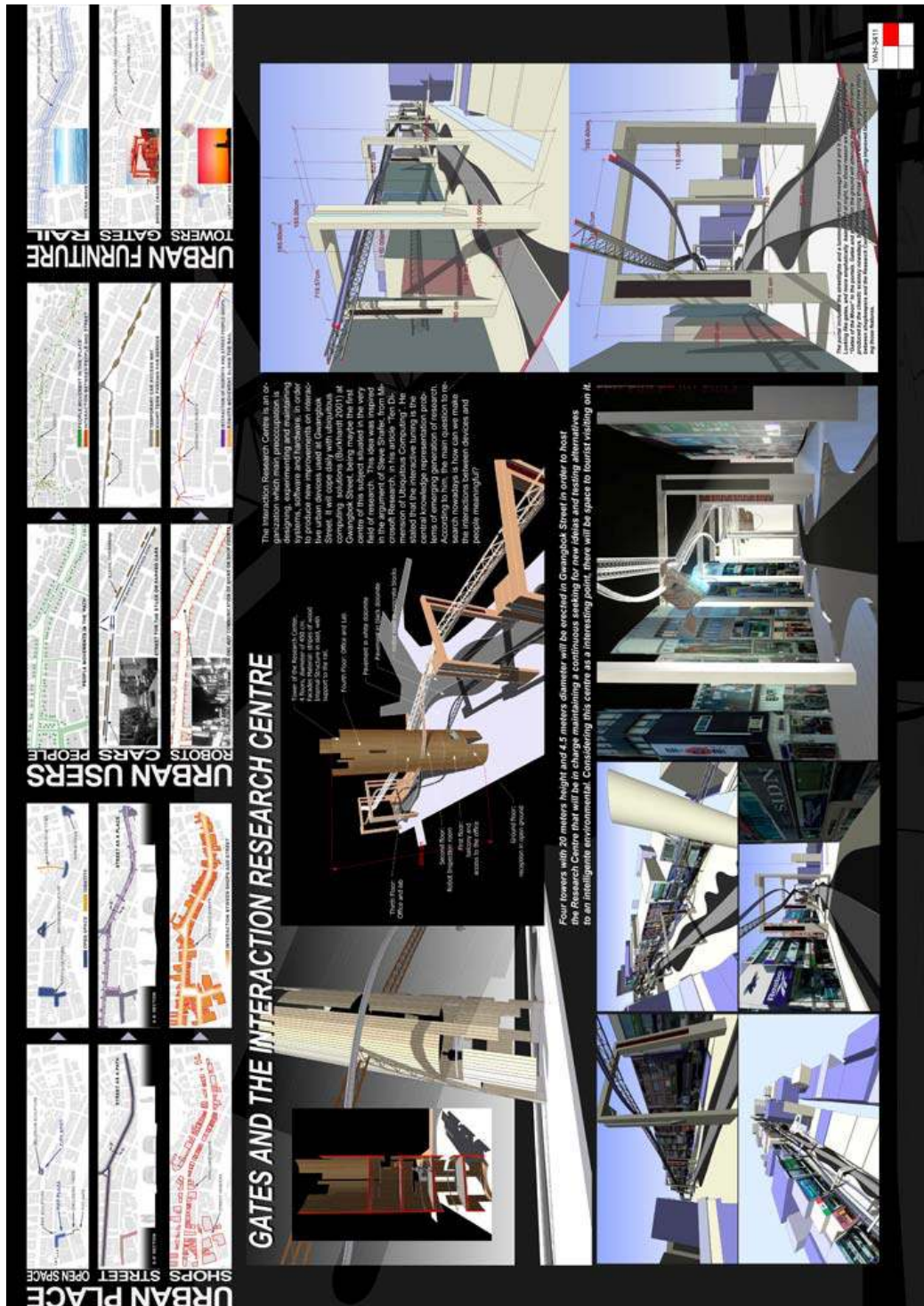


Figure 6: second page of drawings, contest to revitalization of Gwangbok Street and PIFF plaza, 2005.

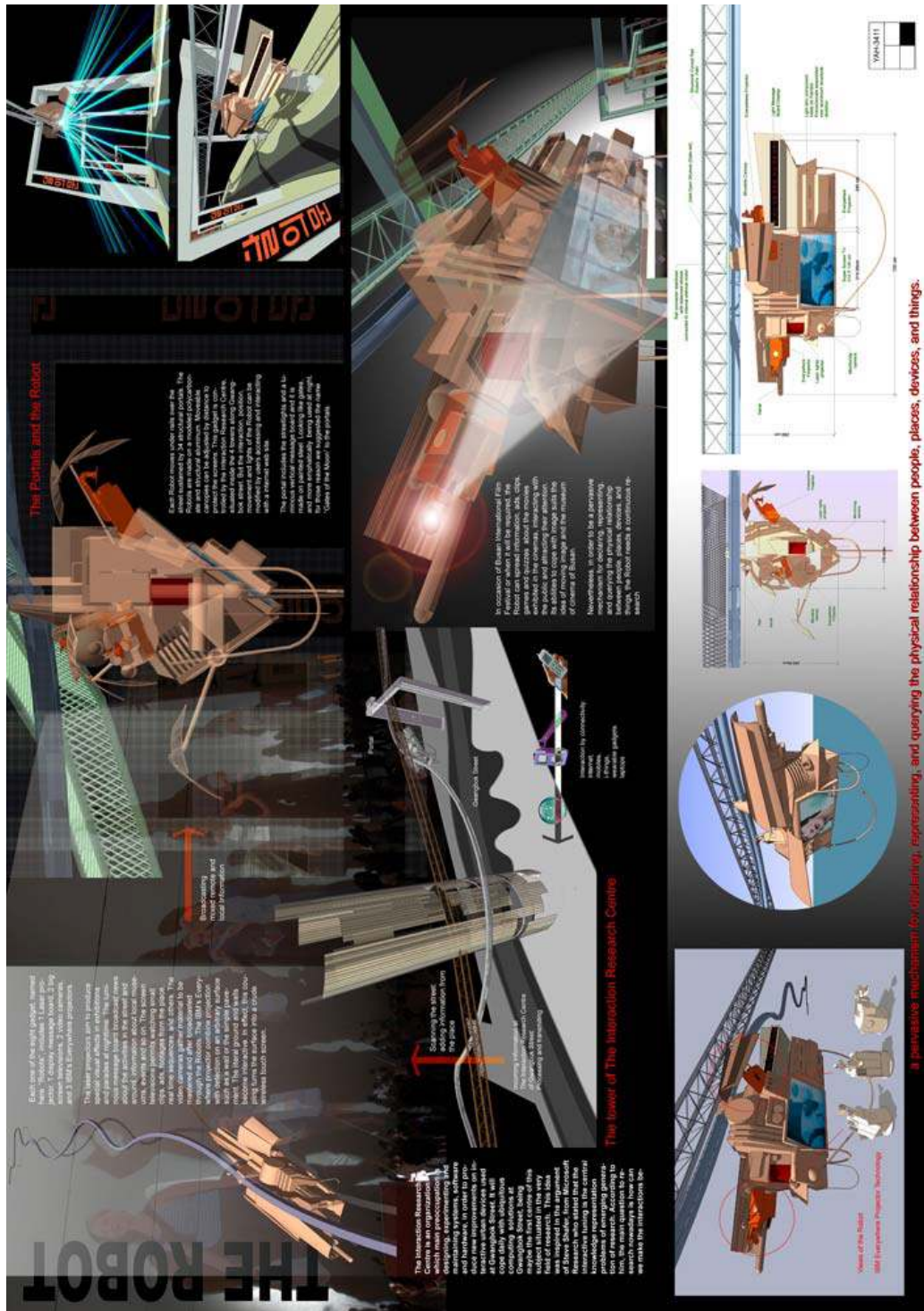


Figure 8: fourth page of drawings, contest to revitalization of Gwangbok Street and PIFF plaza, 2001

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