HYPA AN HYPertext SYSTEM ABOUT THE URBAN GROWTH OF THE CITY OF PALERMO

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Abstract

At the Department of Representation at the University of Palermo an hypertext about the evolution of the city of Palermo has been developed. The system told the events that marked the evolution of the city by images and text. The hypertext structure allow the reader to paginate the story following different need and/or curiosity. The system is open so it is possible to maintain the data base and to update it with specific contribution (degree thesis or research) or with the addition of new data related to already developed themes.
Themes of the research

The work presented try to verify one of the most advanced scientific goal, also in the Architectural Representation. The attempt is to overcame the sequential knowledge acquisition replacing the traditional method with a direct form of simultaneous inferences where the complexity of data can be read through global processes of continuous logical send back, and the path trough the data can be directed by one’s curiosity. The research has a subject and develop a method and it happened that during the development of the work the subject and the method integrated and supported each other. The subject is the story of the events that have determined the growth of Palermo and the progressive urban shape; the method is the hypertext management of documents towards a net of references that allow to follow, through nodes and links, the web of the events.

Starting from the collection of published documents (texts and images) and unpublished ones (reliefs and original elaboration from the Disegno and Rilievo class and from Dottorato di Ricerca) a sequential scanning for temporal sections has been organized as references: the origin, XIV and XV centuries, XVI century, XVII century, XVIII century and XIX century. Around these temporal sections the data has been organized, the keywords defining the links have been choosen, and finally the possible paths among data have been traced.
Structure and function of the system

The complexity and the dimension of the system suggested two conditions that represents the grounds for the planning the work and characterized the structure of the system:

1. to carry out a system structured on different levels to offer more possibilities for the consultation;
2. to define a structure that will allow the develop of the project in the future with the addition of new themes as well as the increasing of the data related with themes already developed.

To satisfy the first one of these conditions we wrote a computer program that permit two different kinds of access to the data:

- the first one more traditional, allow the user to access the data (text, pictures, animation) following the normal method of consultation of an archive: index, keyword. It is then possible to select all the images related to a period or search the texts belonging to a certain author.
- the second kind employ an hypertext system and allows to navigate through the data base using the link that join the different documents and to paginate the story following the personal need. This is possible choosing interactively among the link present in each document.

The hypertext consultation starts from the temporal schemes that represent the entry points in to the data base. The choice of an hypertext system allowed the realization of a system whose links among data, declared when the object are entered in the data base, make up a net of logical connections, in this net there is a big number of possible paths among which is possible to choose and to build up the desired one.
The second goal was to realize a system with the possibility to develop specific research and also to insert in the structure studies and research already done. So the system developed could be used as a reference tool for the teaching people, for the students, and in general terms for everybody concerned with the document related to the urban growth of Palermo. To achieve this goal a second computer program has been written with the behavior of a module, with the same structure of the principal one but without reference to the city (no temporal schemes, no reference tables). It allows the realization of themes related to a specific knowledge: degree thesis, research work and studies already done that once developed can be linked to other object presents in the system. The modules can be utilized independently from the principal program during the developing step as well as the working phase. The possibility to operate separately on different chunks allows the integration of different expertise and permit a continuos update of the work this because all the data introduced are common heritage of the system.

**Data structure**

The data base is set up from objects belonging to one of the following class:

1. object you can consult;
2. links between objects.
Fig. 5 - The city plan at 1500, using the button is possible to move before or after, consulting the index referred to this period.

Fig. 6 - The city plan at 1500 with the links superimposed.
The object you can consult can be simple ones: images, animations; or also complexes objects (a module), that is a set of simple objects. The separation into two classes allows to have different links for the same object; therefore a certain document,
for instance an image, can have different links for the different contexts from which it can be called. The links among data are explicit declared and not extracted automatically from the system. It is possible to define hype as a guided hypertext, that is a system where not all the possible link are declared (and used): not all the words in a text are used as link, not all the objects present in an image are used as links. The choice of the link is done when an object is entered in the data base, for a text it is possible to highlight some words, for the images it is possible to define some areas.

**Conclusion**

The work reported has, above all, a methodological value. In fact independently from the contents, that can be in a continuous change, the system realized suggest a new method for the study and consultation. The work is not closed or ended; it is set up as an open structure that is possible to change and to update, but indeed suggests a logical structure supported by a methodology for the representation of the knowledge different from the one offered by more traditional document (books, magazine, dictionary): whose rigid structure allow us to think at them as nodes linked to other nodes of a virtual undefined structure whose keywords, for a hypothetical index, may be: *Lightness, Quickness, Visibility, Multiplicity.*

![Fig. 9 - The hypertext consultation for the module concerning the Esposizione Nazionale 1892.](image)