Web-based virtual models in knowledge exchange forum

The reconstruction and restitution support techniques in WWW
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The article presents the web-based project which implements the idea of multidisciplinary information exchange related to historical objects and supports both research and studying activities. The proposed platform combines the concept of forum, information on resources, monitoring tools, as well as review and comment scientific oriented validation mechanisms.

Keywords: knowledge production; information exchange; web-based research; architectural research; reconstruction hypotheses

Introduction

One of crucial problems of science in contemporary world is to be able to follow, to be aware and to benefit from multidirectional inflow of information, many research programs and their results. The advent of computer technology and, particularly, internet opened an opportunity to exchange knowledge freely, quickly and efficiently, adding and developing visual conveyance to the level that was never reached before. But the process of commercialization resulted in closing, isolating or separating knowledge sources even, if science “products” are pure contributions to the theoretical discourse non-related to any economic activity of universities. Several sources of scientific data no longer serve those who are seeking answers, but those able to pay for the access regardless of whether the scientific work is focused on generating profits or not.

Probably that may appear as main reason to elaborate various platforms of knowledge exchange and knowledge production. Still information technology remains an important media to exchange information among the members of scientific community. The purpose behind the WAKEForum project is to render the web environment accessible for an exchange of scientific information in a systematized way, with structure necessary to maintain required precision and credibility of data. Arguing with the concept of Wikipedia and Wikimedia we may find that while the concepts seem to look similar, in fact the latter project is edited and addressed to achieve popularization of information. In WAKEForum not an encyclopedic type of information but rather profes-

Figure 1
WAKEForum website.
essionally elaborated and sorted data are presented and the focus is on their verification, criticism and validation. The web technologies are thus the media of communication, allowing for achieving the above mentioned aims.

**WAKEForum**

The concept behind Web-based Architectural Knowledge Exchange Forum (WAKEForum) is to provide preliminary methodological structure and mechanisms for defining, verifying, evaluating and commenting the progress of the research in the field of architectural reconstructions. What’s more the idea behind the development of the system is to allow design procedures in web-rooted sources containing 3D information on discussed object. The process of validation through scientific board is also of significant importance as it is in interdisciplinary discourse on the shape architecture could take in the past. To fulfill the purpose of creating a multitasking platform, WAKEForum is composed of multiple layers of interactive pages offering assorted pieces of information. The main area provides links to sub-structural pages – researchers panel, object data panel and comment’n’evaluate panel.

The researchers panel (RPanel) is an area of limited access, restricted for those registered, willing to build the contents of object database. RPanel provides opportunity to build object, edit object, erase object and structure the information both through text and visually (currently simple graphic representation intended to be finally developed into interactive 3-D models). The options of insertion include also the ability to define the GPS positioning to reflect the conceptual reconstruction in a way allowing the checkout and *in situ* examinations. The object data panel (OPanel) is basic source of information accessible for everyone, interested in passive or active using of collected knowledge. Most significant role is assigned to the comment and evaluate panel (CPanel), because the crucial idea is to present the results of architectural analyses as soon as possible (or immediately after the elaboration). The CPanel allows commenting the hypothetical reconstructions or restitutions, allows reaching various sources of information spread throughout distant locations. The CPanel also refers to GPS system, allowing attaching selected piece of information to global coordinates.

The information collected in the WAKEForum contains text data including name, description, timeline, destination and important (or characteristic) architectural features. Graphic data is also provided including 2D and 3D representation superimposing real, confirmed information and actual research assumptions. While WAKEForum is at its initial period of compilation and activity, only few objects are inserted into the database, currently adopted in *.rtf* and *dwf* formats as well as renderings explaining the visual aspects of the buildings. For the testing purposes a group of Teutonic Knights castles was chosen, especially those less known and less documented. Radzyn Chełmżański, but also Bratian and Starogrod were elaborated and inserted into the forum.

**Applicability**

How to use WAKEForum? Beside mere forum, beside the pure combination of text and graphic information available without unnecessary restrictions that is elaborated as a live platform to confront the hy-
Summary

The main purpose is to achieve few goals:

- provide researchers with a common platform of information exchange,
- equip the researchers with web tools allowing them to efficiently control, validate, compare and comment data, which is instantly and quickly updated,
- precede or follow the research programs,
- compose the database for historical, architectural and multidisciplinary sources of information,
- allow remote access and reconstruction options available in both descriptive and graphic forms,
- activate the common efforts of adepts oriented towards scientific research, who do not attend or form institutional bodies (that also includes students activities and support for research programs – important part of WAKEForum is the result of that type of activity, cf. Kepczynska-Walczak, 2004).

Note

The project has been conducted by Robert Barełkowski, the author of the program with cooperation of students of Wyższa Szkoła Gospodarki w Bydgoszczy – Marcin Sajdak and Sambor Mieruszewski.

References