

*mgr inż. Adam Górka*  
*Janusz Majewski, PH.D.*  
*Małgorzata Żabińska, Ph.D.*  
*School of Banking and Management*  
*adam.kazimierz.gorka@gmail.com; kr951fc@gmail.com; gosia.zabinska@gmail.com*

## **DISSEMINATION SYSTEM OF CREATIVE WORKS AS ILLUSTRATED BY APPLICATION USED TO PUBLISH LITERARY WORKS**

### **Introduction**

For all kinds of creators the Internet constitutes a window onto the world which makes it possible for them to present their works: films, music, paintings, comic strips, short stories, poems, jewelry, clothes, etc. so that a highest possible number of people can see them or hear about them. It frequently happens that creators present unfinished works or introduce alterations after some time. Moreover, the Internet enables them to present the process of creation. Publicizing a work of art involves discussions, comments, opinions and interpretations of the recipients of works of arts. For the creator, apart from the possibility to make his/her work accessible in the network, it is crucial to obtain the feedback while for the recipient it is important to have an easy access to the artist and his/her work. The artist's website has recently become a kind of a business card or a portfolio, it is a place where his/her work and artistic personality can be presented personally. An interesting and attractive website is a significant element of the promotion of artists and their work.

What is more, the communication of artists with the enthusiasts of their work is also important. The dissemination of information in promotional and cultural events results in the increase of the number of participants. An information system that sends e-mails about the latest elements that appear on the artist's website is of major importance both for the artists themselves and the recipients of their art.

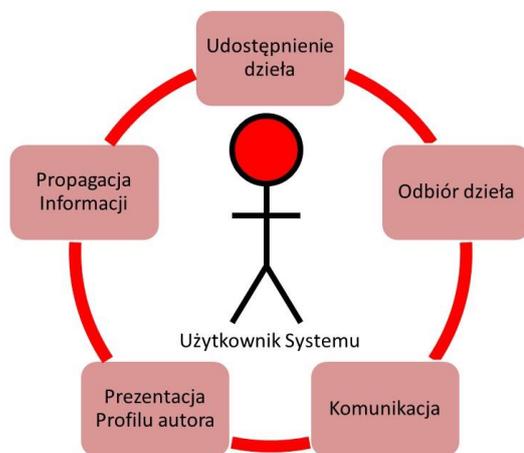
Thus, there is a demand for a system that would be cheap to produce and easy to apply by the groups of future users that are involved in creating and publishing works of art as well as the ones who receive and evaluate them.

The aim of the article is to present an idea and implementation method of an Internet dissemination system of works of art as illustrated by an application to publish literary works.

## 1. Description of the concept of the system

The system that would provide the artists in various fields with the possibility to publish or share their works and the recipients of art to evaluate and comment on them, etc. would have to be equipped with adequate functions supporting the groups of users, as well as with auxiliary functions to be used by special users such as e.g. administrators, moderators, etc. The system that would meet the above listed requirements should make it possible to fulfill groups of functions that are presented in fig.1.

*Figure 1. Groups of functions useful to the users of the system*



In the system there are three classes of users that play the following roles: recipients of the work of art (Internaut, Fan), creators of the work of art ( Author) and auxiliary people (Moderator, Administrator, Super Administrator). The analysis of the previously described problem makes it possible to identify the functional requirements set for the system that aims at the dissemination of works of art through the Internet.

From the point of view of the recipients of a work of art, the system should:

1. make it possible for the people entering the service to receive the works of art without the violation of the copyright;
2. enable the fans entering the service to comment on the works that are published;
3. provide e-mail communication between the recipients and the author;
4. inform the interested Fans about new developments and cultural events that are offered by the service by means of automatic generation of e-mails

For the creators it is important that the system should:

1. make it possible to create and maintain a pleasant profile of the artist, a unit or a group in the form of a portfolio, with a notice board and space for biography;

2. enable the Author to publish easily his/her literary works, together with some additional information about them;
3. make it possible to create containers for the collections of literary work;
4. provide e-mail communication between the recipients and the author;

From the point of view of the auxiliary users, the system should:

1. have control functions to protect against undesired information (the Administrator's and Moderator's accounts)
2. enable the supervision over particular groups of the system users.

## **2. Requirement model**

Having analyzed the functional requirements from the point of view of the above listed types of actors that interact with the system (the Internet service), a general use-case model of the system was built (figure 2).

### **2.1. Actors and their role in the system**

Any person that enters an Internet service from a browser is an *Internaut*. Such a person can freely surf through the commonly accessible parts of the internet service as well as open a new Fan account. The Internaut can also log into the already existing account. When logging into the account, the Internaut is identified as a particular type of user who is then given access to the system functions that are appropriate to his/her role.

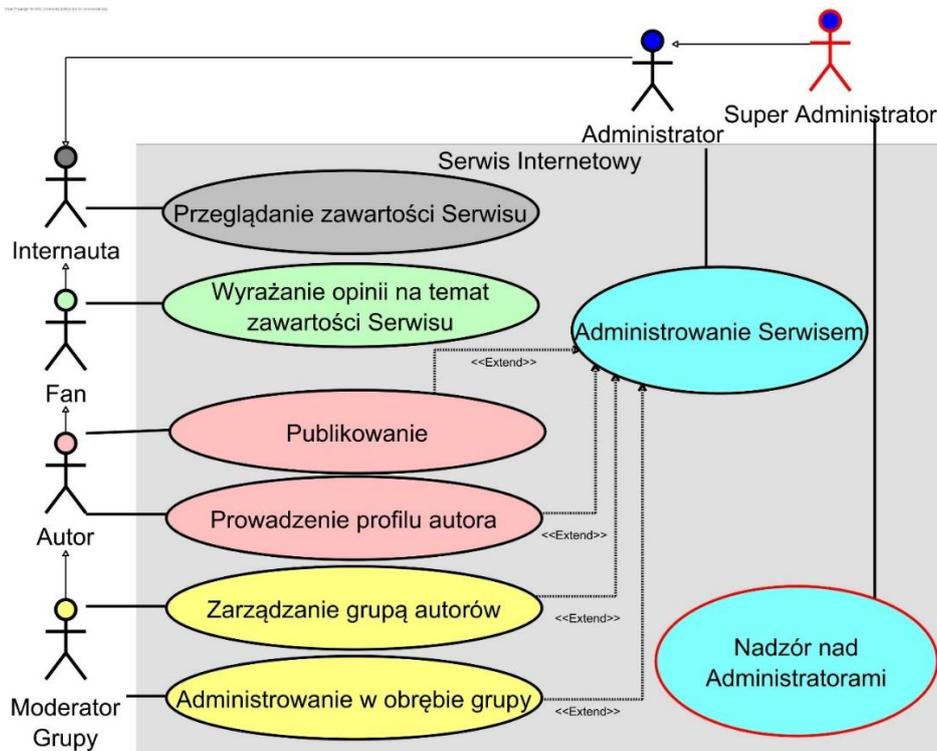
*Fans* can express their opinions on the service content in several ways. They can put and delete their comments on the works of art that are made accessible. They create and modify lists of their favorite works and authors. They decide on the writers from whom they wish to receive information about new developments and events. Having received a permission from the Administrator or the group's Moderator, Fans can convert their own account into the account of the Author of a selected group of Creators.

Authors have all the functionalities that are accessible to the Fans. Moreover, they keep their own profiles on the service and run their boards. They can send e-mails to their Fans informing about new notices on their boards or new publications. They can catalog their works of art in containers and publish them.

*Moderators* are the Authors who play the role of Administrators within a defined Group of Authors. They can modify, censor and delete any resources of the service that refer and

belong to their Group, which relieves the work of the Administrators. Moreover, they manage the information about the Group and the accessible sub-websites on the Group as well as they can accept new Authors to the Group

Figure 2. Actor and use-case model for the system (internet service)



*Administrators* are entitled to modify, censor and delete any information that appears in the service. They manage the appearance of the service and the users accounts. On the Fans request, they decide on the conversion of their accounts into the accounts of the Authors of selected Groups or on the conversion of the Authors accounts into the adequate Group Moderators accounts. With the increase of the number of the system users and Groups, the opening of additional Administrators accounts may appear to be indispensable in order to maintain order in the System.

*Super Administrator* is a privileged Administrator who has the additional authority to open new Administrator accounts and to close the existing ones. That enables the adjustment of the number of Administrators to the size of the system. Moreover, in the case of a significant number of Administrators, their work has to be supervised with the possibility to remove the accounts of incompetent Administrators.

## **2.2. Groups of use cases**

The Internauts use the service to browse through its content. They can view not only the works of art published there but also the profiles of the creators, their boards and the fans' opinions on their works.

The Fans use the system to express their opinions on its content. With that aim and to show their interest, they create lists of their favorite Authors and their works. They can also add their comments on the works and the posts that are placed on the Authors boards.

For the Authors the system is an opportunity to create an attractive profile whose objective is to arouse the interest of potential users that enter the service with the aim to open their Fan account and in the course of their next visits. The authors can influence the content of the system by organizing, describing and sharing their works.

The Moderators use the system to create an attractive profile of the Group of artists. They can add or remove the Authors from the Group they manage. They use the system to supervise the content published by the Group authors as well as they can intervene into the content of the Fans' comments.

The Administrators monitor all the information published by the system users. They can block or remove the user accounts, while the Super Administrators can add or remove the Administrators accounts.

## **2.3. Selected scenario examples**

### **Expressing views on the content: Add comment**

Figure 3 presents in the form of an UML activity diagram a scenario of adding new comments in the system. It is an example of the system application case referred to as "expressing views on the content of the service"

### **Work publishing : Add Publication**

The scenario of adding a new publication by an Author that is presented in the activity diagram in figure 4 is an example of the system application case referred to as "Publishing"

### **Zarządzanie Grupą Autorów: Przyjmij nowego Autora**

### **Managing a Group of Authors: Accept a new Author**

Figure 5 presents in the form of an activity diagram a scenario of accepting a new Author to the Group of Authors. That case is referred to as "Managing a Group of Authors" The scenario describes the work of Moderators or Administrators in response to a Fan's

application to become an Author. The objective of the scenario is to convert the Fan account into the account of the Author of a selected Group.

*Fig.3. Expressing views on the content: Add comment*

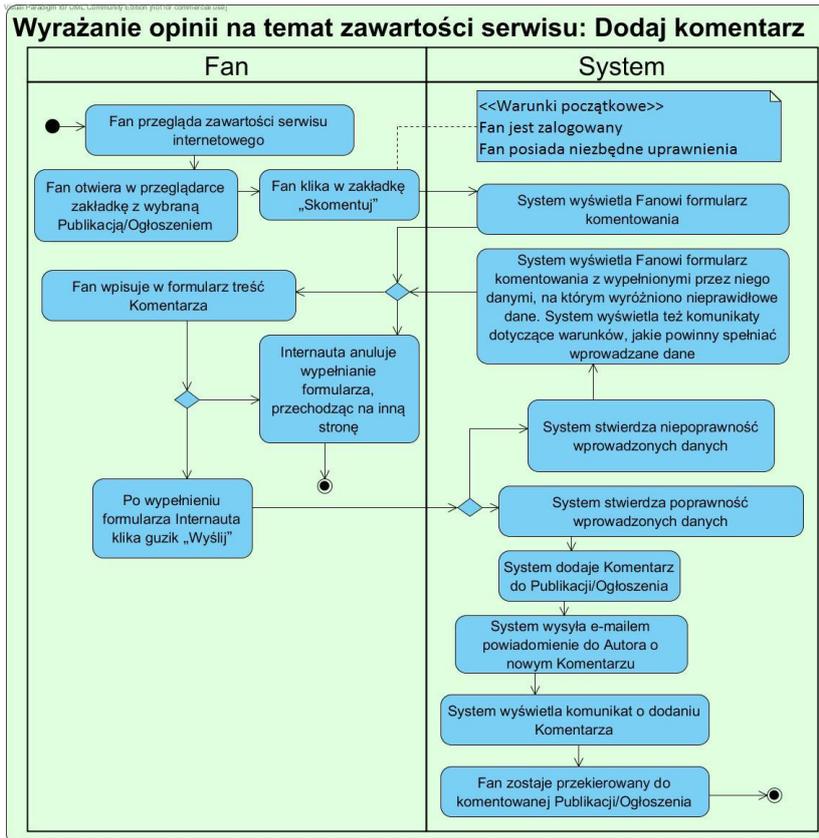


Figure 4. Work publishing: Add Publication

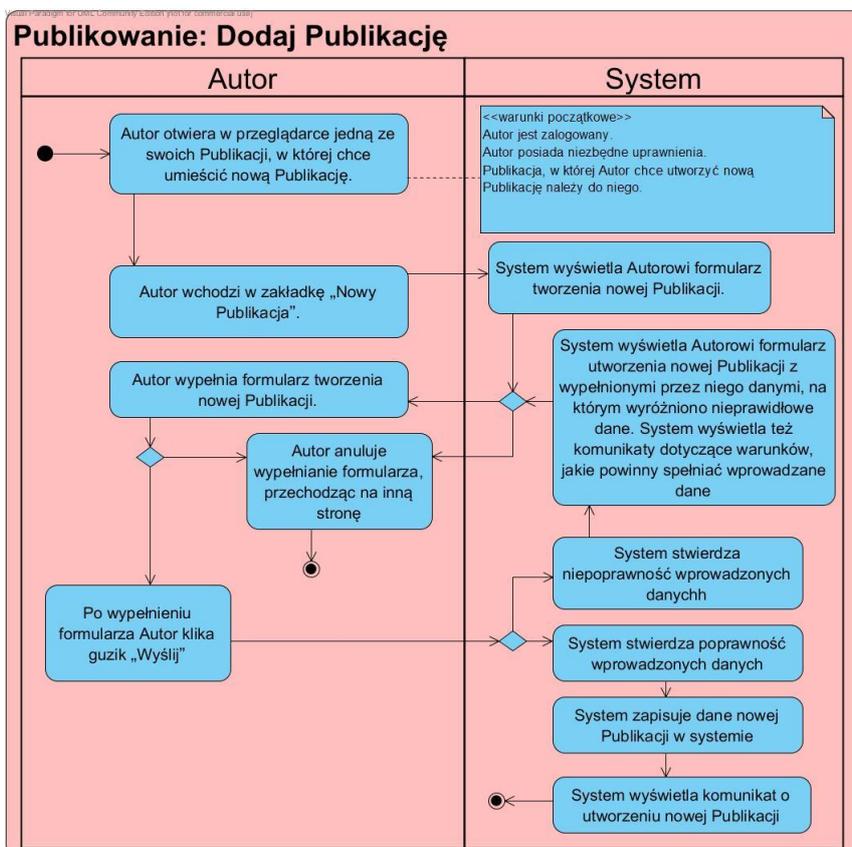
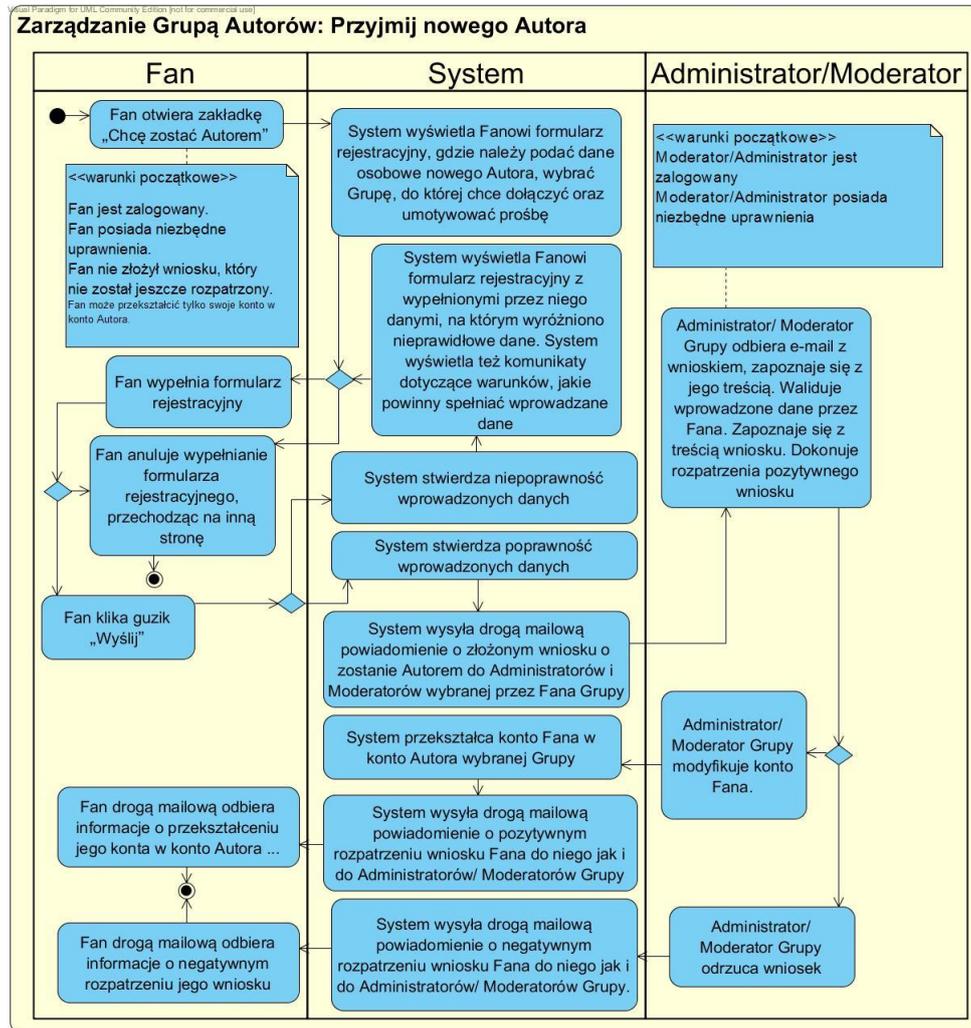


Figure 5. Managing a Group of Authors: Accept a new Author



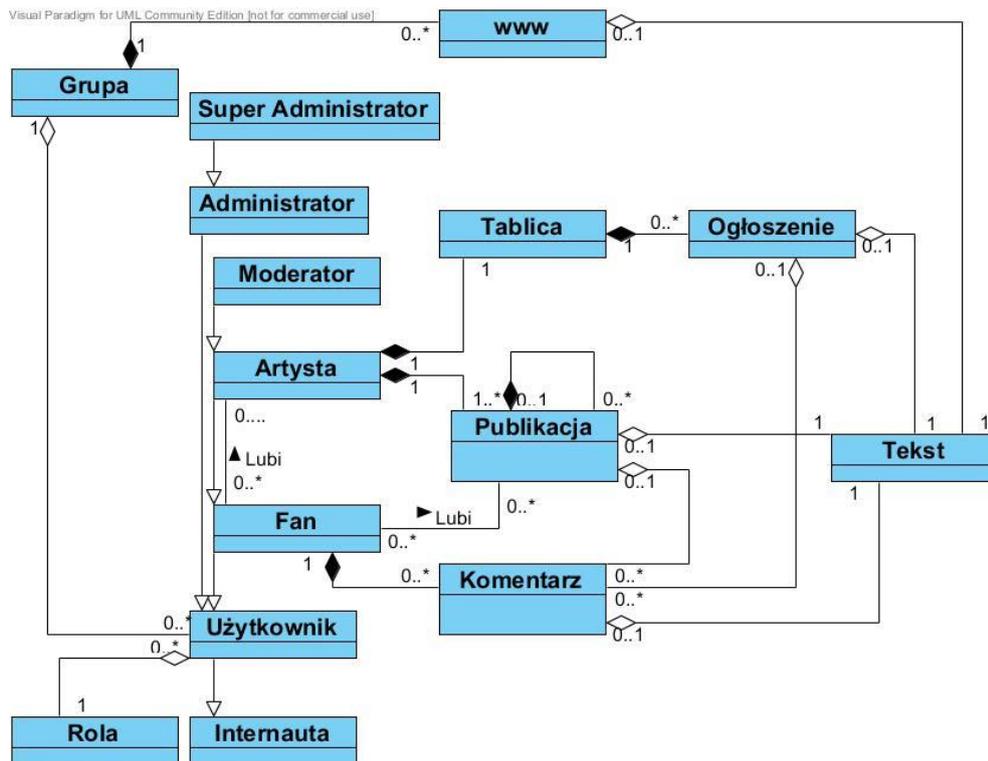
### 3. Preliminary system model

Having analyzed the functional requirements and scenarios of the system use cases, a preliminary system model was constructed as shown in fig.6 (and discussed in detail in [1]).

Apart from the implementation of actors, the following objects were distinguished:

- Groups formed by their Authors and websites including text;
- Comments of fans including text;
- Publications including text organized in tree-like structures;
- Author notice boards consisting of posts with text.

Fig.7. Preliminary system model – a scheme of object classes



## 4. System implementation

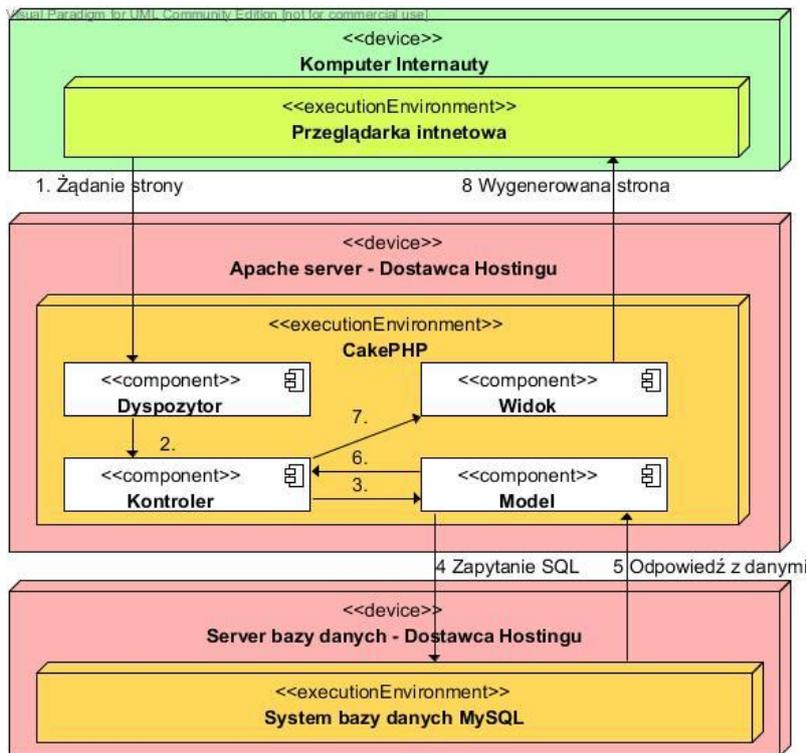
### 4.1. Implementation of functions

A pilot option of the system was implemented in the form of an application to publish literary works on the Internet. The designed version of the system meets the functional requirements listed above and implements the system use cases discussed in the paper. MVC approach was used in the implementation [2] and the system architecture is presented in fig.7.

### 4.2. Technical assumptions

To design the application the CakePHP design pattern was applied [2]. The decision was made to use Apache server which is most commonly applied by external hosting and the MySQL database server. The application of the MVC design pattern enables the separation of the layers of data processing, application logics and data presentation. Such an approach enables an easy adaptation of the pilot application version to newly developed requirements such as publishing other kind of textual content, graphics, music, films and other objects.

Fig.7. The architecture of the system

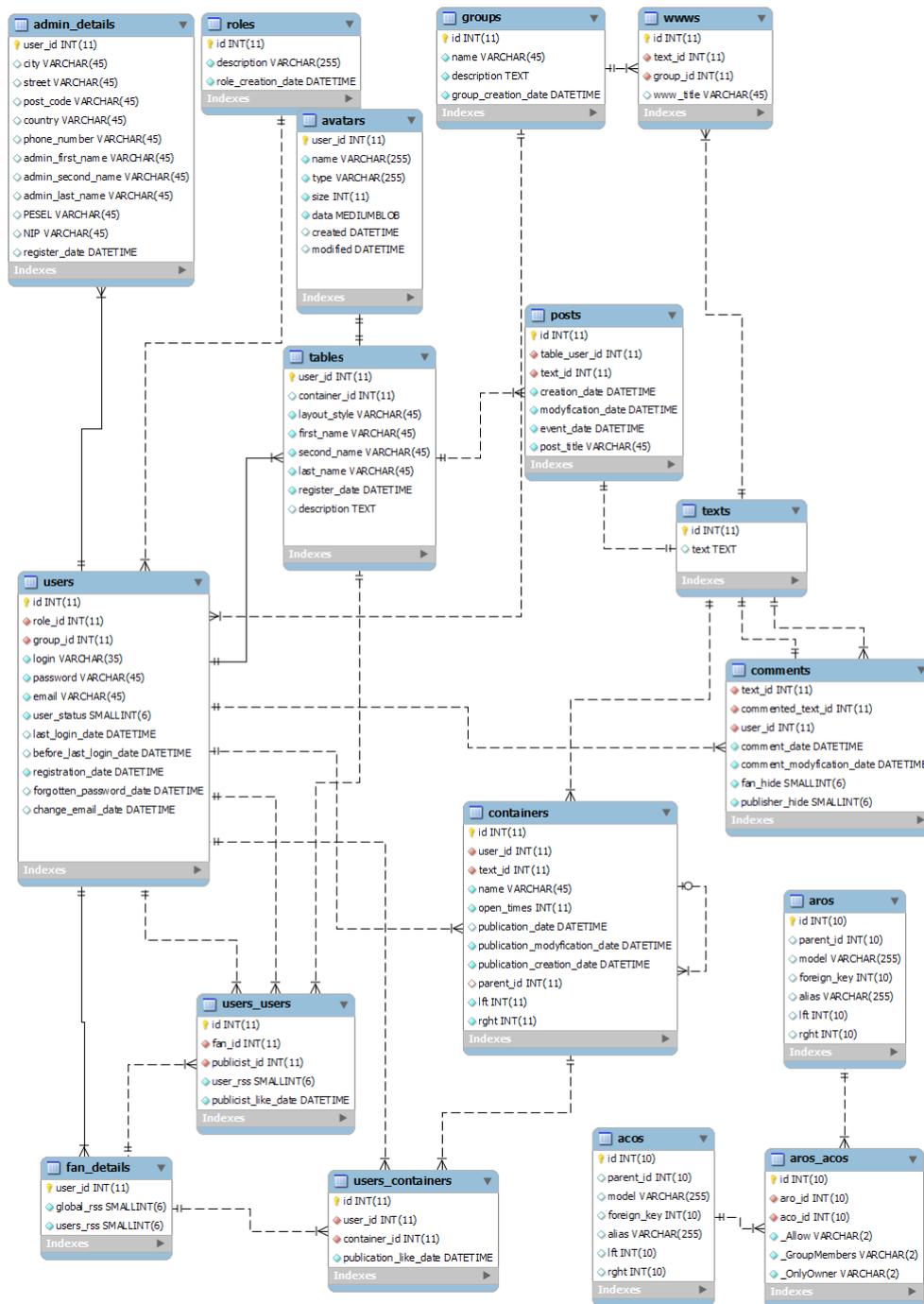


### 4.3. Interface

The interface of the application is built of a graphic banner that shows in the upper application window and – slightly below – of upper and left-side panels which enable the navigation through the application content. The upper panel also shows the logging form and – after the user has logged in – the user’s login. The main content that is placed below the panels with navigation presents the completion of particular controller’s methods in a simple and user-friendly way. The use of the MCV pattern enables an easy adjustment of the interface to the changing requirements of the Authors. Further details regarding the interface are to be found in work [1].

### 4.4. Database

Figure 8. Model scheme of the implemented MySQL database



The objects of the application being designer were implemented in the database design in the form of 17 tables: 14 main ones and 3 auxiliary ones. The three auxiliary tables: acos, aros i acos\_aros are indispensable for the functioning of the component built into the CakePHP. The names of the tables in the database, Models, Controllers and Views were given along with the convention used by CakePHP. That makes it possible to avoid manual

configuration of the links between the subsequent framework layers. Moreover, it enables a future development of the application of other developers.

#### **4.5. Technical parameters of the application**

In order to start the application, it has to be loaded into the server, e.g. Apache with the `mod_rewrite` mode on and PHP 5.2.8 or higher. The application must also be configured with the database. The application supports drivers to the following database servers: MySQL, PostgreSQL, Microsoft SQL Server, and SQLite.

### **5. Conclusions**

A fully functional system that meets the desired functional objectives was designed to disseminate literary works of art on the Internet. It enables the creation of an attractive looking profile of a creator or a whole group of artists. It is a tool for publishing and easy management of literary works that also facilitates the communication between the artist and the recipient of the art. The system was installed on a production server and the application is being implemented in the C.K.Norwid Culture Centre in Krakow by the SYLABA poetry group that associates poets and writers [3]. At the application implementation stage it will be a challenge to convince the SYLABA artists themselves about its advantages, which will probably require some further modifications to the pilot version.

In the future, after the implementation, the application should be adjusted to the GODO (Inspector General for Personal Data Protection) requirements as regards the security of personal data stored in the server. It will also be crucial to optimize the fragments of codes whose functioning may not be optimal for a major set of data. The system can be modified so that any artist can publish his/her works on the Internet in different forms: music, video or graphics. In order to share a variety of works a generalization of the method of their storing in the database would be required as well as the implementation of a universal way of their presentation. The artists should have the possibility to influence the application layout and adapt it to their needs. That is why, it would be advisable to implement in the future a mechanism that would provide the artists with greater freedom to control their sites.

## Bibliography

- [1] Górka A., *Aplikacja bazodanowa w technologii CakePHP do publikowania treści literackich*, diploma thesis, WSZiB, Kraków 2013.
- [2] <http://book.cakephp.org/2.0/en/cakephp-overview/understanding-model-view-controller.html> *Understanding Model-View-Controller*
- [3] Zechenter-Spławińska E., *Almanach grupy poetyckiej SYLABA 4*. [in:] Wykurz W. (ed.) *Ośrodek Kultury im. Cypriana K. Norwida Kraków os. Górali 5*, Kraków 2011.

## Summary

The article presents a concept and elements of a design of an implemented system for disseminating literary works of art. The system enables a presentation of works of art on the Internet as well as the process of their creation together with the assessment in the form of discussions among the recipients. The MVC design pattern was used, which provides a substantial flexibility of modification and development of the pilot system.