# Presentations Management System

Pavel Smirnov, Yuri Katkov, Irina Pochinok, Dmitry Mouromtsev SPB National Research University of Information Technologies, Mechanics and Optics Saint Petersburg, Russia

{pavel199shtormov, katkov.juriy, i.pochinok, d.muromtsev}@gmail.com

#### Abstract

Organizing conferences and congresses is rather complicated and routine process for organizers. Receiving papers, working with participants, planning program and timetable, formatting and printing proceedings – are only visible aspects of work, which should be done. That's why any automation tools, which can help and make organizing processes more fast and effective are required. One of such tool called "Presentations Management System" described in this paper.

Index Terms: Semantic Media Wiki, Presentation Management

#### I. Introduction

Originally the idea to create tool, which can improve conference organization appeared from ability to click on large QR-codes on exhibitions. One example of such approach have been demonstrated by Kia company on 2009 Detroit AutoShow[1].

The main conception was to provide visitors with opportunity to detailed information about presentation user interested in through QR-codes, printed on every poster. Also all data was available online through the web interface. The first version of the system was tested during poster session at FRUCT 9 conference. The experience showed that our system is rather benefit tool for all sides: visitors, organizers and participants. Also new functions implementation encouraged us to develop the system up to next versions.

### II. IDEA DESCRIPTION

Working on the project we have developed prototype of system for organizing virtual sections on conferences. Purpose of the system is to get and accumulate details about presentations from their presenters and provide different types of access to it for organizers, participants and simple visitors. Organizers obtain an automatic tool to get all information from participants and to use it for planning conference program and days agenda and archiving previous events. Participants can know more about colleagues and share their contacts to every interested person. Visitors may see detailed description on their mobile or PC screens even during presentation. More than that, the system exports data to SmartConference, which performs virtual conference moderator and organizes presentations process (forming agenda, time controlling, listing slides, storing files, etc.)

Technically the system is a set of scripts, which should be deployed on conference website and participants register themselves and submit data through web interface. System based on Semantic Media Wiki(SMW) technology because the technology of creating semantic websites has become stable and clear during recent years. For example

[2] shows the experience with building the Semantic portal based on the institute knowledge base.

# III. SELECTION OF SEMATINC MEDIA WIKI

We decided to base our system on Semantic Media Wiki technology(SMW). Wiki systems proved their effectiveness in educational and scientific areas. For example, the list [3] contains hundreds educational departments, which use Wiki system to organize communities and groups according to their scientific works. This widely spread usage means that Internet community is interested in wiki-approach. The list of websites using Semantic MediaWiki is available in reference [4].

Semantic Media Wiki is extension of MediaWiki engine allowing to create semantic annotations or properties, in SMW terminology. SMW allows user avoid adding duplicated data again and again by setting typed "semantic properties" to one page and use them everywhere by querying. This makes the wiki looks like a data base and it is the main advantage of system. Let's consider the following question as a simple example: What are the presentations, where presenter has the professor degree? Traditional wikisystem still doesn't work in such case because effective methods of natural language processing haven't been developed that much yet. Semantic MediaWiki introduces some additional wiki-markup into the text of the articles which allows users to add semantic annotations to the wiki content. As they told in the introduction: "while this first appears to make things more complex, it can also greatly simplify the structure of the wiki, help users to find more information in less time, and improve the overall quality and consistency of the wiki" [5]. The questions mentioned above can be addressed by using the formal query language developed by the SMW team. Semantic MediaWiki manual gives an introduction to those main elements of the system, [6] describes the formal syntax and semantics.

## IV. COMMON USE CASE AND EXPAMPLES

The system is available through the web interface as separated area, where participants register themselves and manage their projects data. Each project have its own URL-address, thanks to it every project is always available online. URL can be presented either in a text-format or QR-code, which can be printed everywhere (posters, papers, business cards). This code if generated automatically according to QR-code standard [7] when a new project has been submitted. Every mobile device having a QR-code reader automatically redirect mobile browser to URL, then visitor focus camera on QR-code printed somewhere. Specially optimized mobile template applies to the system, when QR-code identification is detected.

So, the main use case:

- Before the conference beginning participants submit their projects to wiki Submitting data to system goes through a specially-configured form providing user-friendly interface and allows to get rid of writing semantic-coded data. When the submit button is pressed, SMW automatically generates all the property values representing related data on webpage compatible with universal formats RDF and OWF.
  - Visitors can view submitted projects before the conference, find and attend the most interesting

- Participants can exchange contacts between each during and after conference thanks to presenter's photo
- Everyone can browse data about project on mobile device screen using QR-codes, if presenter somewhere placed it
- Wiki can export all data to SmartConference system and presentation process would be organized according to it. SC project is conference manager, which allows presenters to manage presentation process from their mobile devices. It means, what presenter having special client and presentation file on mobile phone can attend conference through wifi. And no need to use flash cards, copy files or connect PC with projector just use your mobile. SmartConference like a virtual moderator automatically limits presentation time and observes order according to uploaded agenda. SmartConference gets agenda from special formatted xml-file. We have developed an interface to generate such xml-files: administrator should input session start and end time, sort order of presentations according to conference program and xml would be generated. We also storing presentation-files and SC uses them to display via url-address. So, getting and accumulating data in our system we provide it to use by SmartConference application to automize conference process.

The index page shows all available presentations. Any visitor can choose a project and view all information about it, e.g, date, authors, keywords, presenter photo, section, PDF-version of presentation. Every important fact presented as a link and is also clickable. Clicking on it, the visitor will see another page with information selected according to the data of this link. For example, one can see all presentations, which contain some keyword, or all presentations of selected section, or all projects by selected author and so on. Presenter photo is rather important field, which would help visitors finding the key person of the presentation in the crowd and asking him any questions or get business card.

## IV. CONCLUSION AND FUTURE WORK

The main achievement of second version is interaction with SmartConference project. During working process we have implemented some new tools and functions:

- Tool to generate configuring agenda-files and send them to SmartConference
  - Uploading and storing presentation files and providing them to SC
  - Archiving data from previous conferences
  - Search projects by presenter name, organization or conference section

At FRUCT 10 we plan to try-out integration our system with SmartConference and organize poster session using our system. For the future we are planning about recommendations of the related papers by making queries to Linked Data sources or services like Google Scholar. Another perspective is EasyCheer integration – we plan to import structure and some data from EasyCheer, and reduce amount of required fields during project submission.

## IV. REFERENCES

[1] KIA is using QR Codes at the 2009 Detroit Auto Show: <a href="http://2d-code.co.uk/kia-soul-qr-code/">http://2d-code.co.uk/kia-soul-qr-code/</a>

- [2] D.Herzig, B. Ell, "Semantic MediaWiki in Operation: Experiences with Building a Semantic Portal", 9th International Semantic Web Conference (ISWC2010), http://data.semanticweb.org/conference/iswc/2010/paper/397
- [3] Examples of educational wikis: <a href="http://educationalwikis.wikispaces.com/">http://educationalwikis.wikispaces.com/</a>
  <a href="mailto:Examples+of+educational+wikis">Examples+of+educational+wikis</a>
- [4] Sites using Semantic MediaWiki: <a href="http://semantic-mediawiki.org/wiki/Sites using Semantic MediaWiki">http://semantic-mediawiki.org/wiki/Sites using Semantic MediaWiki</a>
- [5] Introduction\_to\_Semantic\_MediaWiki <a href="http://semantic-mediawiki.org/wiki/Help">http://semantic-mediawiki.org/wiki/Help</a>
- [6] J.Bao, L.Ding, "Knowledge Representation and Query in Semantic MediaWiki: A Formal Study", *Tetherless World Constellation (RPI) Technical Report*, 2008, http://www.cs.rpi.edu/~baojie/pub/2009-06-02\_iswc-bao\_tr.pdf
- [7] QR-code standard <a href="http://www.denso-wave.com/grcode/grstandard-e.html">http://www.denso-wave.com/grcode/grstandard-e.html</a>