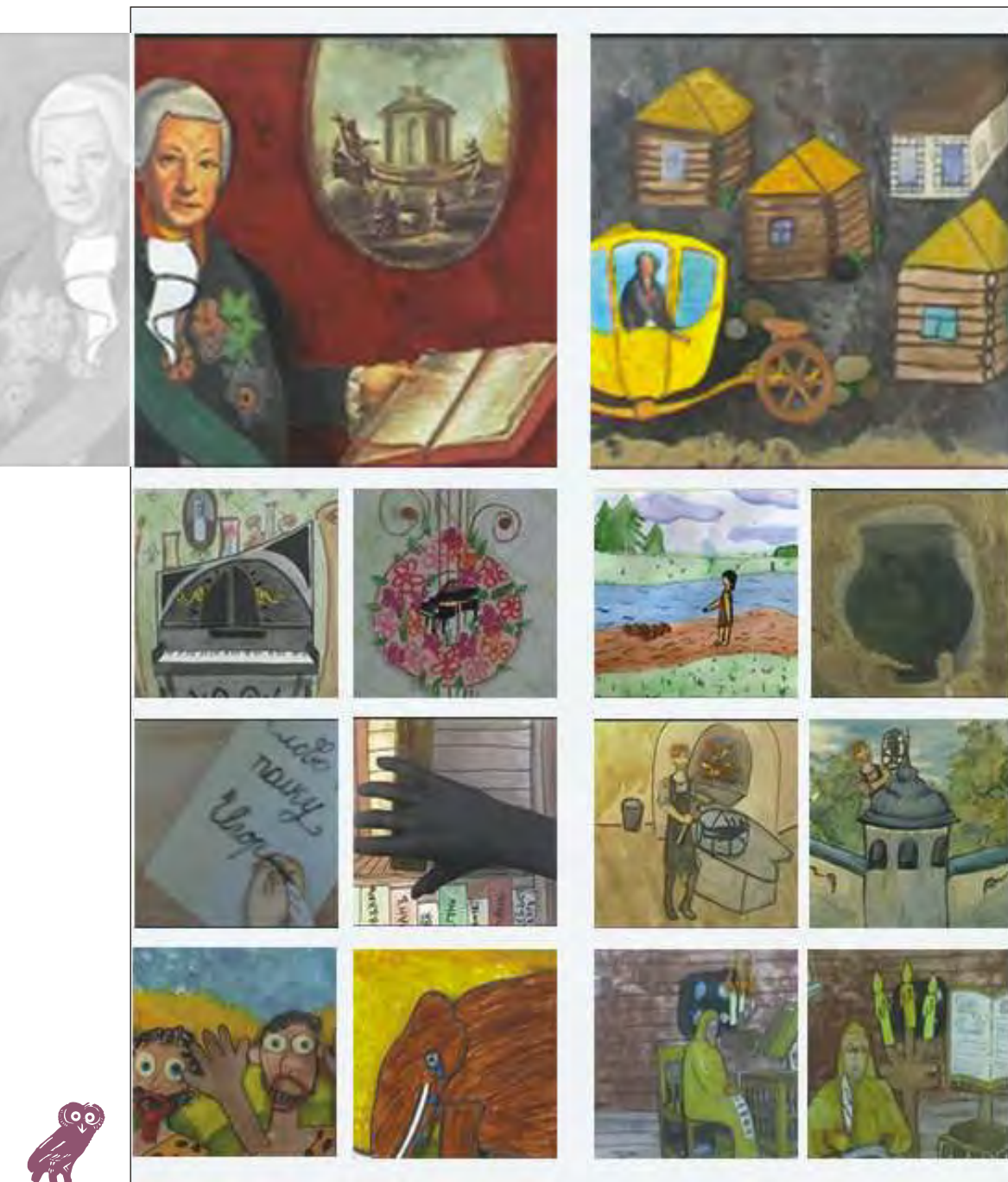# Possibilities and Limitations of Repeated Use of Digital Resources: Museum Multimedia at the Internet Festival "Museum Geek"

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Museum objects
brought to life'
Jaroslavl Museum
Preserve.

The search for an interesting camera angle is a very important factor, which often plays a role in the decision of the multimedia developers to re-digitise the museum material. A new camera angle can become a starting point for a different interpretation of a museum object.

The State Museum of the History of Religion (http://gmir.ru) is a Russian-wide research and methodology centre within the Ministry of Education of the Russian Federation working on the problems of museum religion studies. Each year the museum holds regular seminars, internships, and conferences on various problems of religion and museum studies, including questions about implementing and using digital technologies in museums. To organise this research and methodology work in the field of digital technologies, the museum chose the format of an Internet festival. This format allows remote study of the practices of Russian museums in the field of museums' digital programs, and allows participants to make some general conclusions based not only on their own experience.

In 2014, the State Museum of the History of Religion organised the first Internet Festival of Museum Multimedia - "Museum Geek". Forty-four museums from Russia, Ukraine, and Belarus participated in the competition. Joint projects with Finnish museums were also submitted. Seventy-one applications were submitted for five categories of the competition ('digital collections', 'multimedia for exhibitions and collections', 'educational programs', 'programs for people with special needs', and 'museum advertising and PR').

Electronic collections
Azov Historical
Archaeological
Museum Preserve

Completed projects on free topics were also submitted for the competition. Museums with different specialties – historical museums, museums of local history, art, natural history and science, museum preserves of landscape and architecture and departmental museums – presented their programs. The archive of the festival (including competition requirements, a list of jury members, links to all competition projects and other information) is available at http://gmir.ru/special/seminar/gik/.

We believe that the museum multimedia projects submitted to the competition allow us to analyse some aspects of repeated use of digital resources in new digital projects. In our opinion, the trends in this use are as follows

1. The existing museum databases can only partly be used by museums to create new publicly accessible multimedia applications. Despite the fact that the principle of one-time data input with subsequent repeated use of this data has been the main principle since the first museum databases were developed, experience shows that information is not universal and specialists need to digitise the museum archives again or even many times.

2. Digital materials, created during the development of multimedia applications for museum visitors, can and should be used to augment the general museum databases, including internal databases.

The materials of the first year of the festival "Museum Geek" give us several examples of the use of databases practically in a direct way with minimal corrections for the online users. Such projects participated primarily in the category 'digital collections' and were digital electronic catalogues (collections-, themes- or re-

gion-based). The jury believed that the most interesting projects in this category were integrated resources – that is, joint catalogues of several museums. The website 'Museums of Jugra: regional digital catalogue' was the winner of the category. http://hmao-museums.ru/agg/fund/view-funds.jsf. An important part of the website is a joint regional digital catalogue of museum objects and collections, which is updated once a month. More than thirty museums take part in the projects at the moment.

Electronic catalogues of the Kizhi Museum (http://kizhi.karelia.ru/collections) were in this nomination, too.

The museum information system 'Open Karelia' (National museum of the Karelia republic, Petrozavodsk) was another integrated resource at the festival, aimed at universal representation of information and its repeated use (http://openkarelia.org). This system, its developers believe, is of interest both to visitors and to museum workers. At the moment, the system is a cooperation of eight museums of Russian and Finnish parts of the Karelia region. The program runs on the open platform Geo2Tag. The unique feature of the program is the technical possibility of representation and development of individually tailored edu-

cational and cultural programmes and of tourist routes.

Information, catalogues, and modules of the system can be used by independent developers to create new services (games, multimedia guides etc.). This possibility was demonstrated during the Festival "Museum Geek". The category 'programs for people with special needs' was won by the project of the museum information system Open Karelia for people with hearing problems. This is a demo version of a barrier-free environment for people with disabilities, which allows visitors to the National Museum of the Republic of Karelia to choose their itinerary themselves, find their way on their own, and listen to texts about museum objects that are not included in the usual audio guide program.
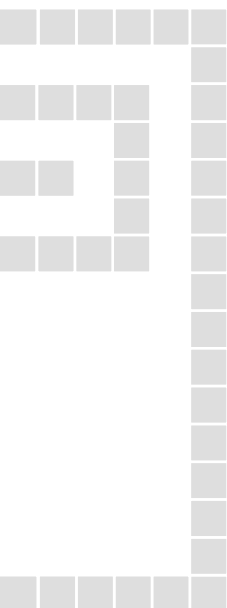

Internet-app 'Open the gates'
The Novgorod State Museum Preserve

Animated
Christmas card
Yaroslavl
Art Museum

Several of the projects presented at the festival use catalogue images of museum objects to create interactive games. For example, the exhibition program 'Curiosities of Cherdyn' (Pushkin Museum of Local History, Cherdyn) contains not only the catalogue of museum objects with brief descriptions and explications, but a game as well, in which players can put together an image of a museum object using several pieces (http://youtu.be/b1MlBTg_aBQ). A demo clip of the interactive program, developed for the museum collection, was presented at the festival.

A similar scenario was implemented by a different museum for an online project. The Internet app 'Open the gates' (The Novgorod State Museum Preserve) contains both an electronic catalogue and a puzzle game (www.old.novgorodmuseum.ru/igra/). The project's main idea is to introduce the Magdeburg Gates of the Sofia Cathedral to the wider online audience. This monument is well known in Novgorod and is part of all touristic routes, but at the same time its significance and value are still only known to a small number of specialists. The bronze Roman gates of the main west portal of the Cathedral consist of

26 panels with reliefs, which represent Biblical motifs, historical figures and symbolic images. The app contains a puzzle game with various levels of difficulty. The puzzles contain all of the motifs that feature on the reliefs of the gates.

Several programs demonstrated at the festival belong to the popular museum genre of multimedia movies. These are slide shows using catalogue images, animation, and music (or original text). Several such programs ('Museum life in posters', 'Museum collections', 'Secrets of Astrahan Kreml') were demonstrated at the festival, for example, by the Astrahan State Joint Museum Preserve of History and Architecture (http://astrakhan-musei.ru/t_menu/t_menu/category/176).

The same technology was used by the Yaroslav Art Museum (www.youtube.com/playlist?action_edit=1&list=PL5Pb_YCe_gfOix-_nPEk9kTxsQK8BGs6H), and National Kiev Architectural Museum-Preserve: (www.kplavra.kiev.ua/fotoslide/_5/slide.html).

Among the most interesting programs were animated computer videos, created by using images of museum objects and children's art. The visitor approach to the museum collections, the informal character, and the charm

'Curiosities of Cherdyn' Pushkin Museum of Local History, Cherdyn

'All 900 days of the Siege'
Art Museum of the Republic of Karelia (Petrozavodsk)

of children's interpretations win over both the wider audience and the museum experts. The nomination 'Museum advertising and PR' was won by an animation of paintings and drawings from the archives of the Art Museum of the Republic of Karelia, created by the participants of the studio 'Clouds' for the exhibition 'All 900 days of the Siege'. The exhibition was held at the Art Museum of the Republic of Karelia (Petrozavodsk) http://vimeo.com/86488838. The program was used to promote the exhibition online.

The special prize of the festival was awarded to the show 'Museum objects brought to life'. Seven animated films tell funny stories of museum objects from the collection of the Jaroslavl Museum Preserve. The project was created by collaboration between museum staff, children and teachers and was demonstrated both online and at the museum at the 'Museum Night 2013'
www.yarmp.yar.ru/ozhivshie-e-ksponaty-internet-prem-era-mul-tseriala/.

The materials of the festival "Museum Geek" show that in many cases developers of museum multimedia have to digitise museum objects specifically for their projects and cannot use the already existing museum information resources. The insufficient amount of data in the joint museum database is a problem caused by several factors, such as:

1. Not all museums have even nearly fully digitised their collections.
2. New easily accessible digitisation technologies appear and they allow the creation of impressive multimedia programs.
3. Sometimes the existing digital materials are not suitable for implementing new ideas.

An example of a relatively new, easily accessible technology is panoramic photography and video, which is used on a large scale to demonstrate online museum exhibitions, collections, and architectural complexes. Digital imaging is very attractive for museums: fifteen virtual tours were demonstrated at the festival.
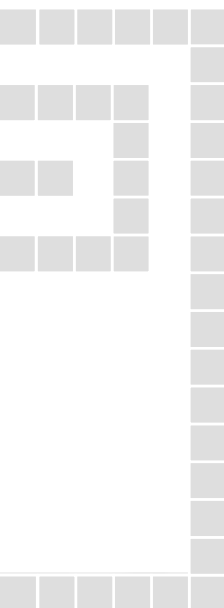

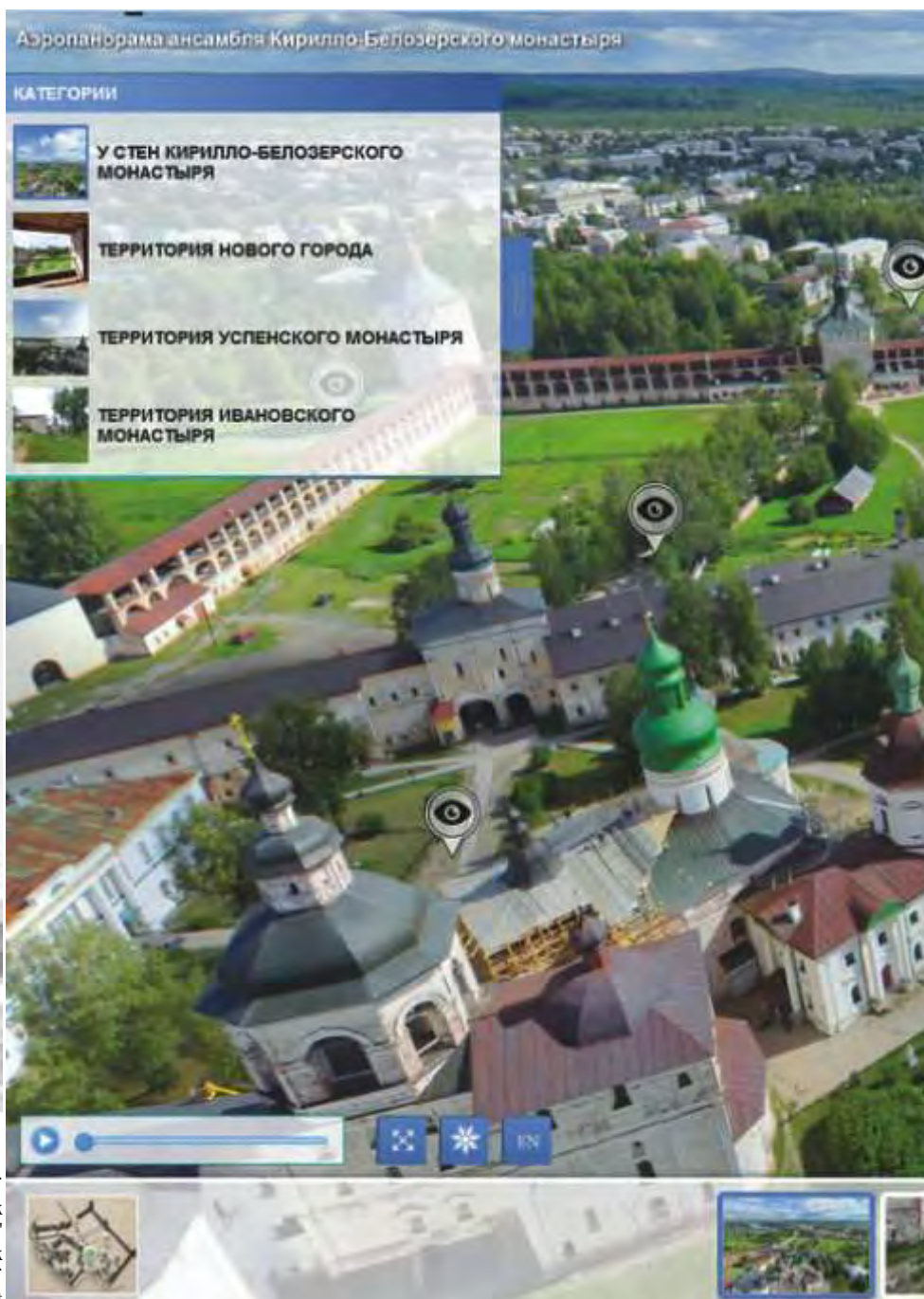'The Carriage of the Children of the Emperor Alexander the Second' The State Museum of History, Moscow

Virtual tour Irkutsk Museum of Architecture and Ethnography 'Taltsy'

Аэропанорама ансамбля Кирилло-Белозерского монастыря

КАТЕГОРИИ

У СТЕН КИРИЛЛО-БЕЛОЗЕРСКОГО МОНАСТЫРЯ

ТЕРРИТОРИЯ НОВОГО ГОРОДА

ТЕРРИТОРИЯ УСПЕНСКОГО МОНАСТЫРЯ

ТЕРРИТОРИЯ ИВАНОВСКОГО МОНАСТЫРЯ

Virtual tour of Kirill-Belozersk Monastery' Kirill-Belozersk Museum-Preserve of Architecture and Art

Despite such ubiquitous choice of technology, however, each tour has some unique features. Only one of the panoramic programs - the 'Afghan Museum 360°' - runs on high speed and has high resolution.

Only in virtual tours are the objects linked to real maps. For example, the project of the Irkutsk Museum of Architecture and Ethnography 'Taltsy' is linked to Google Maps.. Only the panoramic project 'Virtual tour of the Kirill-Belozer Monastery' allows users to change audio settings of the audio part of the tour, by using 'stop', 'play', 'pause', and 'rewind' buttons (See www.kirmuseum.ru/vtour_new).

Another tour – 'The House with a Lion' – has the option to pause the audio track. http://lion-house.ru/tours/). The panoramic program 'Virtual tour of the Kirill-Belozer Monastery' presents a creative solution – it shows the panoramic view in different seasons. The project was highly praised by the experts and received a special prize at the festival.

As for the filming and photographing of architectural complexes, one should also point out the new possibility of using quadcopters: they show a bird's-eye view, unavailable even for actual museum visitors. Such video- and photo-shoots were conducted by museums for projects such as 'Virtual tour of Kirill-Belozersk Monastery' (Kirill-Belozersk Museum-Preserve of Architecture and Art) and virtual tours 'People of Vologda in the History of Russian America' (Vologda State Museum-Preserve).

Virtual tours 'People of Vologda in the History of Russian America' Vologda State Museum-Preserve
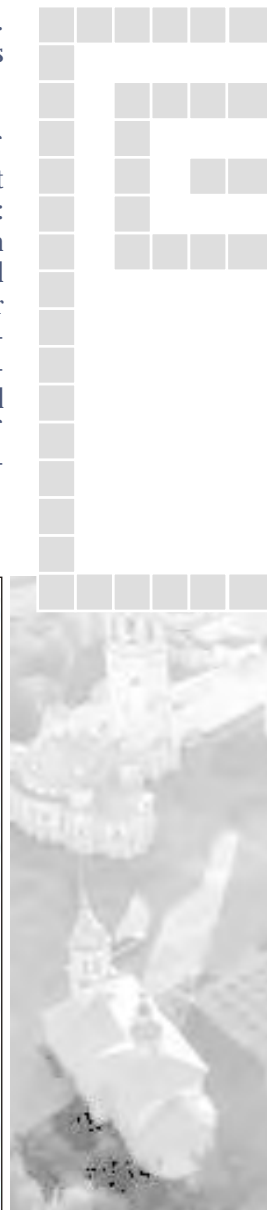
Virtual Tour 'The House with a Lion' Museum of Monumental Art (Popovka)

It is important to point out that the search for an interesting camera angle is a very important factor, which often plays a role in the decision of the multimedia developers to re-digitise the museum material. A new camera angle can become a starting point for a different interpretation of a museum object. This was the case, for example, with the project 'The Carriage of the Children of the Imperator Alexander the Second' (The State Museum of History), which was awarded the prize in the category 'Multimedia for exhibitions and collections' at the festival "Museum Geek" http://luxemedia.ru/upload/musem_geek.

The program is an important addition to the museum artefact: it shows the visitor a new internal viewing angle, which is otherwise unavailable. Notably, the project uses all types of modern high quality technology (it uses high quality video and photography as well as virtual panoramic views, and is mobile-friendly,).

To conclude, we would like to reiterate the idea of augmenting the museum database by digitising museum objects as part of medium-sized multimedia development projects for temporal exhibitions and similar museum projects. The principle 'input once, use repeatedly' is also valid in this case. Digitising as part of a local project partly compensates for the constant insufficiency of data in the joint museum database.

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Museum Collections.
Electronic Catalogue
Museum-Preserve
'Kizhi'

Museum information system
Open Karelia National museum
of the Karelia republic, Petrozavodsk