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INTERNET CHALLENGES FOR CONTEMPORARY CULTURAL MANAGEMENT

Abstract:

This paper will emphasize contemporary approaches of online management structure for arts and cultural institutions. Turbulent economic environment calls for flexible managerial strategies, which will establish balance between traditional values and continual drive for innovations, due to more complex external business factors. WEB technology follows a large scale of customers' needs, and thus formulates a new paradigm for cultural management. In this paper Internet influences on the level of cultural management effectiveness will be researched. New presentation concepts and restructuring data bases in institutions network will be examined. Project Europeana will be presented as the example of successful data classification, creation of virtual exhibitions and digital libraries, which will be used as a framework for further quantitative and qualitative analysis of heritage archiving. Paper will also explore some of the representative examples of Internet related presentations of cultural heritage such as Google Books and Google Art project. Selected Serbian national initiatives presenting cultural heritage via Internet will be discussed and various aspects of accessibility of digital materials originating in Serbian heritage institutions will be analyzed. Business strategies modeling via Internet makes final cultural products more accessible for end users, by simple and fast information and knowledge transfer. Present and future impact of museums and library data digitalization will be investigated, with special focus on practice from the Republic of Serbia. By usage of relevant statistical data, cultural institutions in Serbia will be considered. Important culture projects will be shown, including archeological findings and the cultural route of the Roman emperors in Serbia. Development perspectives will be presented, with the proposition of solutions for their online realization. Paper will also look into new trends in higher education available trough Internet, chiefly represented by MOOCs (Massive Open Online Courses), in the context of their cultural repercussions and influence they might have as an alternative medium for cultural and educational content broadcast. Challenges that employers, employees and general public face today in this area will be discussed as well as the importance and significance of OA (Open Access) business models in culture and education.

1. INTRODUCTION

Continual changes in the Web system challenge management of cultural institutions and place in front of them demandable conditions that they have to cope with. The intensive evolution of online cultural management in the last two decades generates new forms of competencies and achieve economic and cultural balance, which is a clear sign of sustainable strategy. Main cultural systems involve stable, technologically advanced applications, by which remote museum servers can easily and without mediator share their digital items, that are protected by wired-in central database, run by administrator.

The online presence of interactive management suggests increased implementation of proactive strategies, which lively portray the experience that users get when they visit cultural institutions. Numerous Internet cultural projects broaden the popularity of cultural objects, making exhibits publicly accessible and more feasible. Moreover, visitors tend to attach closer items to a certain museum that they originate from, thereby making market-based management exceedingly successful. Internet cultural networks are especially beneficial for cultural and arts institutions from developing countries.

Few cultural management strategies proved to be particularly efficient, and their improvement constitutes future values of online cultural publications. Some major European Internet cultural projects apply principles, regulations and ideas that can be used as a base model for network improvement in less developed societies. Google Incorporated, as a leader in digitalization of artwork and cultural content, sets up high standards for other corporations and institutions, which can replicate their approach by flexible strategies and discover new styles of online data maintenance. Perspectives of collaboration between cultural institutions in one country rely on diverse, systematic online configuration. Republic of Serbia is a good example of plural cultural sites, where the Internet presentation has great potential. Several cultural projects in Serbia indicate the importance of the Internet, future dependence on Web integration and benefits from contemporary online cultural management.

2. CULTURAL MANAGEMENT IN THE CONTEXT OF UBIQUITOUS INTERNET

Managing digital cultural assets in a globalized environment enhances new, complex business operations, that are becoming primary sources of effectiveness and competitiveness for cultural institutions and heritage sites. Flexible adjustments made through increased system openness and more transparent information transfer call into existence of a new management paradigm, that is used as a framework for the future online cultural portfolio. Large organizations, such as libraries and museums, are moving toward open Internet services, as a vital strategy for creating a sustainable business pathway. Digitalization infrastructure encourages users in becoming active co-creators of design configuration. Dedication of cultural management to educate, inform and provoke interest of beholder via Internet is stressed out. The clash between cultural information and mass media sources create so called "active dozing" behaviour in the form of "cultural window shopping", where visitors treat museums as if they were mass media (Treinen, 1993). Because of that, managers find contemporary communication paths, to foster closer relationship with end users and visitors.

Virtual database of modern arts and cultural institutions represents radical cultural changes, that reflect completely renewed mode of operation involving contribution of viewers, by which they construct special preferences based on the elements of institution (Śliwa, 2011). Management strategies should be constantly altered in order to create modern centres of knowledge, under the influence of technological changes. Reallocation of the institution's resources and new highly qualified personnel are required so that specialized content-owning units could offer digital imaging services and produce important metadata (Bishoff, Allen, 2004). Innovation processes are emphasized through the opportunity given to curators to provide their collections information in more different ways. Effective project management is an essential tool for establishing easier and faster day-to-day system, in which information sharing among institution's departments accentuate greater connectivity and bigger diversity (Hooper-Greenhill, 2005). A range of core services is displayed in the form of virtual exhibitions, as a collection of digital objects, flexible with their needs and interests, that integrates easily accessible, dynamic approach of valuable worldwide information share.

The complex process of transferring traditional values into modern perceptions of the present eliminates separation between form and content and by that prevails the experience of "the non-differentiated ultimate unification between a mythological past and a digital material simulation" (Kalay, Kvan, Affleck, 2008). Rationalization of the content and interactive tools enable developing large, long-term cultural projects, that often in practice demand a substantial amount of financial resources, for which small and medium cultural institutions do not have enough capabilities. Specific services could be created online for various categories of public, so that they are able to organize into online cultural communities, to share their experiences and discuss future cultural and arts prospects. For instance, the virtual museum of Canada is a good example of a well organized network, which consists of an Image Gallery that features over 450,000 images, 500 virtual exhibits, 1,600 member museums and 34 million visits, since its launch in the year 2001 (The Virtual museum of Canada, 2014). A wide variety of information gives an opportunity for visitors to explore the temporary thematic and the permanent collection exhibitions, that creates a further advantage for member museum by promoting their present digital programs and existing cultural assets.

Popularization and presentation of valuable arts and cultural objects are always challenging, especially when cultural management needs to form a balance between maximum visibility versus preservation of unique and exceptional craftsmanship (Hermon, 2004). The worldwide ability to use Internet services will also establish a wide range of possibilities for users to reinforce informal knowledge, that will lead to flexible cultural management, because the virtual world is not bound by time or geographic location. This will further shape whole cultural institutions online system and by that it will deploy flexible management strategies on all levels. Diversity of digital cultural content has provided management with new cash flow opportunities and greater number of pricing strategies, by opening new markets for distribution of the product and by creating new viewing audiences (Byrnes, 2009). Interactivity, connectivity and convergence of Internet systems imply that users can access rare heritage goods, which can produce meaningful cultural experience (Rizzo and Mignosa, 2013). Synergy of cultural institution's knowledge can not develop one-size-fits-all problem solution, but they can

share important insights and work their way into forming one, centralized system as a form of future cultural conservation center.

It is important to keep in mind that effective project management calls for innovativeness, creativeness and proactive attitude of project managers. Realization of branding museums projects, on account of increased customer loyalty and external support, has progressive trend (Wallace, 2006). Branding of museums should contribute to an image creation, "personality" and recognizability of a certain museum, which will be easily identified by visitors and will be returned to in the near future.

The *Europeana* project enables open source to digital cultural objects from European museums, libraries, archives and multi-media collections. By its strategic management, organization, business planning and other core managerial activities it is without a doubt one of the most important Internet projects in the history of cultural content management. Democratization of access and information exchange encouraged rapid growth of available digital objects, so that currently *Europeana* counts more than 28,000,000 objects in one database (Europeana, 2011). These objects are often called surrogate objects that represent digitized arts and cultural objects, which themselves are not directly attached to *Europeana* system, but they need to be accessed by *Europeana* just once in order to process origin quality of heritage goods (Concordia, Gradmann and Siebinga, 2010). The users can explore surrogate on *Europeana* site, which are linked in one-to-one correspondence to remote digital primary, digital representation and real physical objects in provider's website or member institution. There are numerous advantages of this system approach, like avoidance of having many different player formats, surpassing duplication of content, protecting intellectual property rights within centralized web control, preserving object authenticity and many others (Purday, 2009). Homogenization of metadata from national institutions across the European Union is one of the top priorities, so that cross-domain from various national aggregators could function smoothly. Assuming that object management will be responsible for large set of information, *Europeana* surrogate model divided management into five crucial segments: content management, metadata management, surrogates management, rendering management and user content management. Firstly, content management analyses incoming data to *Europeana* system and implements Java Content Repository model for Application Programming Interface (API), in order to overcome heterogeneity between processed objects. Secondly, metadata management is responsible for managing the metadata like schemas, ontologies and records (Dekkers, Gradmann and Meghini, 2008). Thirdly, surrogate management develops surrogate objects, which enhances potentiality of bidirectional system, in which complex semantic context are introduced. Fourthly, rendering management gets XML streams from other components and produce output depending on the channel (Dekkers, Gradmann and Meghini, 2008). Fifthly, user content management task is to control virtually exhibited digital cultural objects, and by that to regularly harvest diverse content from international partners. Therefore, *Europeana* platform sets high quality reproduction and well-functioned technical interoperability as its main goal, by which complex, coherent online system is built. Management advantages of the *Europeana* project consist out of four most important competencies: aggregate, facilitate, distribute and engage. Long-term strategy is to decrease the level of cost allocation based in aggregate activities to 17% in 2015 (from

43% in year 2011) and to allow a more even distribution of activities in between these four tracks (Europeana, 2011).

Google Books, also known as the "Library Project", presents biggest digital library in modern society, with more than 30 million scanned books (Google Books, 2014). *Google Books* provides communities with significant benefits of finding rare titles. All types of books are encompassed. Using optical character recognition, *Google Books* is scanning entire books by generating machine readable content, creating afterwards overall index of all scanned books. Because the full text is processed, users can easily search for specific words within the *Google Books* corpus. Characterizing digitalization of the modern environment, this major Google project sets new standards and provokes questions about current trends and upcoming obstacles in Internet literature accessibility. The benefits are many, such as "text mining" promotion, permission to analyze massive amounts of data, expanding efficient way to research and use digital sources, that offers scholars immense opportunities to amplify their knowledge (Batke, 2010). Nevertheless, "snippet" view suggests that restrictions of commercial available works still prevail in an great extent. Whether *Google Books* will be a more reliable search tool, that professional users could handle more effectively is question that yet has no precise answer, but it can be pointed out that system could be used as a framework of successful cooperation with renewed libraries and skillful managerial operation, that led to complex network, which constitutes as a driving force of global literature digitalization.

Google Art project is another outstanding system that Google Incorporated established. It contains a variety of cultural digitized objects, that are considered to be a cultural treasure of world heritage history. Small, medium and world-renowned museums are connected via specialized tools, that display diverse digital objects in high resolution format. By joining *Google Art project*, the institution has many benefits, including lowering the risk of damaging the quality of exhibited objects, because Google has high-end tools that formats all digitized objects into standardized files, with the minimun data ammount necessary for virtual representation (Google Art project, 2014). It is also connected close to other Google systems, such as YouTube and social network Google+, that direct institutions into centralized data base and by that making impressive level of knowledge sharing and achievement possible.

Network of European Museum Organizations is another great example of how knowledge and cultural management strategy synergy can produce outstanding network, in which museums individually boost their performance through collaborative projects. Members are National Museum organizations, which have to nominate one representative. Aims of the organization are to create educational, collection, social and economic value for their members by promoting cultural activities and informing them about future prospects and present regulations of European policies on culture and museums (Network of European Museum Organizations, 2014). Therefore, organization has initiative to engage members in series of cultural interactions, in order to establish basis for further unification and deregulation.

3. IMPLICATIONS OF INTERNET ON CULTURAL PRACTICES IN SERBIA

The rise of the Internet and the need to present cultural heritage online has been one of the main challenges for management of Serbian cultural institutions. Libraries, archives and museums in Serbia struggled to provide as much online material as possible in past years with success. Most breakthroughs in this area were achieved through participation in big projects supported by the European Union. Between 2010 and 2014 three major libraries in Serbia, participated in some of the major projects related to *Europeana* (www.europeana.eu) – the central European portal for digital objects (Sofronijevic, Milicevic and Ilic, 2011).

Belgrade city library was part of the European Union project AccessIT plus (http://accessitplus.eu) from 2011 until 2013. In this project partners developed online training courses aimed at the staff of cultural heritage institutions. The first course, Digital Repositories for Small Memory Institutions was covering digitization of cultural heritage objects, their preparation for on-line presentation and metadata production. The course also covers practical instructions that should enable institutions to create high quality digital content and make it available to *Europeana*. The second course, Cooperation with *Europeana* covered the detailed explanations on operations and inner workings of *Europeana* along with description of its technical infrastructure. It also covered the procedures that an institution needs to follow so that its digital objects are to become a part of *Europeana*.

University library in Belgrade participates in *Europeana* newspaper project (www.europeana-newspapers.eu). It is a three year project that started in 2012 and will be providing a major breakthrough in free online access to historic newspapers through *Europeana*. More than 18 million newspaper pages will be added to *Europeana*, and more importantly, 10 million of these will be refined through some of the state of the art technologies that will allow for full text search and name entity recognition in large corpora of multilingual newspaper texts for the first time.

According to Network of European Museum Organisations (NEMO), there are 139 active museums in Serbia today, from which there are 21 art and design museums, 19 historical museums, 1 natural history museum, and 98 special types of museums. 90% of them are professionally run (Network of European Museum Organisations, 2014). Number of libraries in Serbia is 2466, with only two national libraries, according to statistical data from the year 2011 (Statistical office of the Republic of Serbia, 2012). Number of registered library users is 1369295. Number of employees in Serbia's libraries, museums and other cultural institutions in year 2011 was 6397. Gross domestic product (GDP) of creative, arts and entertainment activities was 4630 (in mill. dinar), while GDP of libraries, archives, museums and other cultural activities amounts 5181,7 (in mill. dinar) (volume changes in 0,6%) in the year 2011. Revenue from creative, arts and entertainment activities are: from budget 5657625, from sales of goods and services: 765046, from rental 214 and other revenues 307275 (in thous. dinar). Types of construction in libraries, archives, museums and other cultural activities: new facilities 97161, reconstruction 496645, maintenance 125899. Construction completed in the year 2011: museums and libraries 37, cultures, arts and entertainment buildings 98. Value of exports from creative, arts and entertainment activities in the year 2011 was 141

(in mill. dinar) and 6 (in mill. dinar) from libraries, archives, museums and other. Value of imports from creative, arts and entertainment activities was 1169 mill. RSD in year 2010, but only 28 mill. dinar in year 2011. On the other hand, the value of imports from libraries, archives, museums and others in the Republic of Serbia was 5 mill. dinar in year 2011 (Statistical office of the Republic of Serbia, 2012).

The territory of the Republic of Serbia comprises a great number of archaeological findings and traces of past civilizations. These findings have enormous cultural value for Serbia, and should be used as a cultural mosaic, from whom several crucial cultural projects could derivate. Potential that exists needs to be routed to one direction, into forming a solid base for further research, and by that exploiting given possibilities in the best possible manner. This way numerous benefits can emerge from cultural management strategy implementation, which produce new possibilities for national culture consolidation and more professional managing approach of institutions. Lepenski Vir (6300-5500 BC), located in the Đerdap Gorge, represents strong archaeological evidence of settlement from complex foraging society and the farming community during the Mesolithic and Neolithic periods (Chapman, 2000). Nearby main location museum of Lepenski Vir has been built, which is in the composition of the National Museum of Serbia from the year 1978 (National Museum of Serbia, 2014). All together more than 100 cultural items are exhibited in new, modern gallery that is developed in year 2011, that also includes rebuilt entombment methods and hologram reconstruction of houses from that historical period (National Museum of Serbia, 2014).

A vast number of cultural items, more than 10,000 is exhibited in archaeological museum Đerdap, that is known for its variety of findings and long time lag, from prehistoric, Roman, late Roman, early Byzantine and the Middle Ages cultural objects (National Museum of Serbia, 2014). On the territory of archaeological museum in Đerdap few rare monuments from the period of the Roman Empire have been preserved and some traces of established Roman borders, that make this museum so unique and significant. *Tabula Traiana*, a sign that is visible only from the Danube river, is a testimonial of construction activities of *Traian* in this area (National Museum of Serbia, 2014). *Statio Cataractarum Diana* fortress also gives evidence of the importance of this ground for the Roman Empire (National Museum of Serbia, 2014). Furthermore, Roman Emperor Route can be found in riversides of Danube, where Roman legions used to build fortifications in order to protect themselves against barbarians, forming in that way eastern borders of the Empire. Roman Emperor Route is a cultural junction of artifacts, ancient towns, fortresses, Roman art and many more heritage goods. Gamzigrad, one of the localities in this Route, is ranked on UNESCO World Heritage Site of Serbia, that consist of complex build structure and remains of Roman palaces and temples (UNESCO World Heritage Centre, 2014).

Few cultural projects in Serbia endeavour to embetter present Internet support to domestic heritage sites. Project "Magical Touch of Danube - Virtual Museum" enriches natural and cultural experiences of the whole Danube region and brings them closer to visitors (Danube Virtual Museum, 2014). The project is brought together in cooperation of Serbian public enterprise "Belgrade Fortress" and Ministry of Culture and Information of Serbia. The main goal is to encourage tourism growth and cultural expansion in the Republic of Serbia, that yet has not used its full capabilities. A site is created as a form of

platform, in which new data, interactive maps and tables can constantly be entered and updated. The project has many museum partners and plans to widen its scope to neighbouring countries, so that it can become internationally recognized and widely accepted.

In domain of data processing in museum fund of Serbia, one of the most important strategic aims of the National museum in Belgrade, as a central preservation institution, is developing of a unique museum information system of Serbia – MISS, based on modern, internationally established museological and technological standards. In the year 1996 Central register of portable cultural goods was implemented. With its basic electronic evidence of museum objects in Serbia was enabled. In the following phases of development, in the National Museum further development of MISS was continued, in accordance with developed strategy. Contemporary, extended data base MISS was created, which covered data of three central sub-systems: Addition to museum fund – acquisition; scientific-competent processing and, partially, Accommodation of museum fund. More than 220.000 previously entered data in Central register of museum in Serbia have been imported into new, unique MISS base, whereby process continuity was ensured. Internet presentation of museum information system in Serbia can be found on Web address www.eternitas.rs. Section of MISS data base is available to public on the Internet, on Web address www.trezor.eternitas.rs (Gavrilović, 2014).

4. IMPORTANCE OF OPEN ACCESS IN CULTURAL MANAGEMENT

Open Access to scientific knowledge and cultural heritage has been an important social, economic and cultural aspect of Internet since its inception. The rise of OA (Open Access) proved to be challenging in many areas of culture and education management because of the changing business models and cultural frameworks it imposed on institutions, managers, decision makers and other stakeholders in these areas the last but not the least being the general population. Software engineers and tech geeks have been pushing for wider free access to software, knowledge and all aspects of online cultural heritage since the early days of Internet, conflicting sharply with entrepreneurs willing to take advantage of business possibilities provided by the new technologies and wide accessibility to all things digital provided by Internet. This dichotomy is best illustrated by the life long relationship between Steve Jobs and his friend and colleague Steve Wozniak (Isaacson, 2011). Wozniak was an engineering tech geek genius ready to give away his brilliant engineering solutions for free out of pure idealism and empathy for others and Jobs was the one who could turn them into the products and ultimately build the biggest contemporary for-profit company in the world allowing for dozens of spectacular technological breakthroughs and access to unimaginable world wide access to digital today. The duality arising from the need to provide free access to knowledge and cultural heritage for those who can not afford it and the conflicting need to protect authors rights in order to incentives those providing the knowledge and cultural artifacts is still a hot button issue of contemporary debates involving various cultural aspects of Internet and management of businesses that are built on top of Internet.

Almost daily breakthroughs in information and communication technologies, their ever tighter integration with social aspects of technologies use and wide, ubiquitous availability of digital products bring new challenges in the area of OA to knowledge and

cultural heritage. A brand new challenge presented itself in this area in 2012 in the form of MOOCs (Massive Open Online Courses). The free availability of courses that encompass not only video recordings of lectures, but much broader scope of elements making a course in higher education, such as quizzes, essay writing, mid term and final exams, lab exercises, multimedia projects and even student communities, accompanied with ever more sophisticated means of knowledge certification, erupted in an almost frenzy of knowledge grabbing, where millions of students from every country in the world are racing to be certified and trying to acquire as much knowledge as possible that is offered by top ranking universities in first world countries. This is important for education in areas of management and cultural worldwide. The sheer size of online courses, with hundreds of thousands of enrolled students and thousands of those that are certified at the end of the course, making in some courses double or threefold number of alumni respective professors teaching the course have produced in their entire careers, puts forth numerous questions about essence of traditional higher education process, its costs and benefits, for students, but also for other stakeholders in this area. And while early claims that MOOCs will render traditional universities obsolete proved to be premature and unrealistic, more questions are raised after just two years of fast track developments in this area. The beneficiaries of the free education turned out to be not the underprivileged and undereducated, but just the opposite (Garrett & Allala, 2013).

Huge amounts of data collected are true gold mines for those endeavoring to enhance educational process, because for the first time in history every second of learning experience of tens of thousands of students in all scientific areas has been digitally recorded and available to researchers. More subtile questions are raised with post MOOC experiments in combining elements of MOOCs and traditional educational process that seems to be yielding fantastic results. Pressure poised by these questions for managers in education are rising and offers such as the one by one of the leading MOOC platforms edX to one of the leading liberal arts colleges in USA such as Amherst College, to join the platform present hard challenges for both managers and professors of such educational institutions, but also for entrepreneurs running platforms such as edX (Kolowich, 2013).

On the other hand availability of MOOCs in different areas provides huge opportunities in area of culture industries related fields and for heritage institutions around the world (McMorran, 2013). Possibilities for production of such materials are even bigger and are related to both deepening the knowledge of potential users of these institutions, but also with a new kind of cultural industry where use is bordering both the fields of entertainment and of the education. Also managers of cultural institutions have to cope with possibilities MOOCs provide for life long learning of their employees and rising opportunity cost in this regard when employees are executing traditional work tasks. Finally, questions relating to so called "winner takes all" digital industries are hovering around many creative industries and business activities of many cultural heritage institutions, as MOOC business model spills over from education to this field. If one is to envision ultimate heritage culture related experience, of all possibilities available today it is without doubt an immersive, education like, multimedia ride, which resembles MOOCs and may draw a lot of elements from this concept.

5. CONCLUSION

In this work some of the key aspects of future trends in cultural management development were pointed out. Special importance was given to major projects, that should be treated as a driving force of contemporary management in cultural and arts institutions. These projects have precise regulations, long-term sustainability and innovative approach in overcoming potential obstacles in online operations. Dedicated managerial activities of professionally run heritage sites substantially improved present conditions of promoting and preserving heritage objects through digitalization. Scientific research and core competencies made out of these systems strong force for next generations of managers, whereby popularization and increased number of visitors is highly noticeable.

The *Europeana* site brought in a range of innovative managerial activities, that could be considered as a game changing business philosophy. The size of this system is quite impressive, keeping in mind that it is highly organized and run via several management control points. Inestimable is the significance of *Europeana* for worldwide arts and culture, bringing together most famous works within hailing distance from Internet users. Museums, libraries, archives and art institutions that are members of Europeana gain many privileges from intense cooperation. Unquestionable is also the impact that *Google Books* and *Google Art project* had on complexity of cultural network organizations, making them globally accessible. In that sense, Google Incorporated can be treated as the pioneer of global management of cultural digital objects. We can conclude that new era of heritage goods promotion and preservation is becoming a global reality. Closer connections between arts and cultural institutions are expected to emerge out of consistent improvements and specialized network activities in Serbia. Positive results and great efficiency are expected from future application of information and communication technologies, that reflects the positive results not just on museum operations, but on entire cultural and arts environment of Serbia.

The importance of 24/7 availability of cultural heritage and possibilities the Internet presentation of materials coming from the heritage institutions for overall cultural context and development of both global humanity and in national and regional frameworks is enormous. One also has to keep in mind the effects the wide access to these materials might have as a driving force for creative industries in particular and for economies based on knowledge in general. Portals such as *Europeana* present focal points for general public and for managers willing to exploit the possibilities of economies of scale in access to heritage materials. The importance of Open Access to heritage materials for cultural management is great and the same holds true in the field of education where MOOCs lead the way in transparent and free access to high level quality educational materials. By combining the effects of wide spread free access to knowledge economies may achieve growth rates and people may prosper and achieve higher standards in economy, culture and human affairs overall. Challenges that are evident in reaching these goals may be surpassed by joint efforts of managers and all stakeholders interested in promulgating ideas of cultural and economic advancements.

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