Digital Information Services of Heritage Institutions – Exploiting Potentials of Web 2.0 Technologies

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Summary

As a consequence of redefinition in a broader information and service environment, information services of heritage institutions have been particularly reshaped, encountering potentials offered in the field of information services first by Web 1.0, and later, in a more intensive manner, Web 2.0 technologies. Information services of heritage institutions, due to their immanently communicative and participatory nature, are among the first heritage services that have evidently and more intensively begun using the opportunities offered by the Web 2.0 technology within the field of providing digital information services. Heritage institutions are improving their information services ever more intensively with tools such as podcasts, blogs, wikis, digital video games, Web 2.0 social networks, virtual worlds and other tools to be developed in the future. It is sure that Web 2.0 technologies make possible diverse manifestations of heritage information services in a redefined environment.

Key Words: Heritage Institutions, Digital Information Services, Web 2.0 Technologies

Towards 2.0 Information Services

As a consequence of redefinition in a broader information and service environment, information services of heritage institutions have been particularly reshaped, encountering potentials offered in the field of information services first by Web 1.0, and later, in a more intensive manner, Web 2.0 technologies. In the last few years, information services of heritage institutions, as well as heritage services in general, have gradually raised the awareness of the so called 2.0 concept, which appears to intervene in a whole range of activities „sensitive" to technological innovations, thus opening new opportunities for transformed and advanced social practices. Information and service models of heritage institutions, even in the Web 1.0 environment, due to their communicative and par-

ticipatory nature, were a solid base on which the following phase of Web technology development, known as Web 2.0, encountered service manifestations which would become a form of protoservice for other forms of heritage services. Information services of heritage institutions, due to their immanently communicative and participatory nature, are among the first heritage services that have evidently and more intensively begun using the opportunities offered by the Web 2.0 technology within the field of providing digital information services.

Library Instruction in the Web 2.0 Technology Environment

At the very start of redefining information services in accordance with the so called 2.0 concept, or their move towards 2.0 information services, the modified nature of library/heritage instruction began to manifest itself as one form of heritage information services that would very early "migrate" into the socially richer Web 2.0 environment. The first generation of library instruction is much less dynamic than the current, more interactive, sophisticated and emphatically multimedia library instruction within the Web 2.0 environment. This is achieved in various interactive ways, either by instructing the user through an online quiz, that is a range of answers to a set of posed questions, or by using current tools such as wiki, blogs or virtual "rooms" for real-time message exchange (chat rooms) to create an atmosphere of "classroom learning", thus creating a "space" for active information exchange among a large number of participants and information experts.

In addition to that, an insight into instruction materials which heritage institution users find attractive and useful confirms the increasingly appealing, and thus necessary use of one of the Web 2.0 original technologies – podcast. According to K. De Voe "podcast is a digital audio recording available on-line (...) the word podcasting is derived from the combination of the words iPod and broadcasting."[1] Heritage institutions are still, in most communities, in the experimental phase of implementing podcasting as a Web 2.0 tool in the field of providing heritage information services. There are still no sure indicators of advantages and/or disadvantages of their use in the heritage context. Furthermore, theoretical literature on this subject has not made a significant contribution, majority of published texts on podcast use in the field of library/heritage services being based on technical or implemental aspects, without any significant identification of advantages or potential disadvantages of their use. In other words, there are no necessary generalizations that would be helpful in better

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[1] DeVoe, K. 2006. Quoted in: Jowitt, Angela L. Perceptions and Usage of Library Instructional Podcasts by Staff and Students at New Zealand's Universal College of Learning (UCOL). // Reference Services Review. Vol. 36 (2008), No. 3; pp. 312-313. https://proxy.knjiznice.ffzg.hr/proxy/nphproxy.cgi/000100A/http/www.emeraldinsight.com/Insight/viewPDF.jsp=3fcontentType=3dArticle=26Filename=3dhtml/Output/Published/EmeraldFullTextArticle/Pdf/2400360309.pdf (28 April 2009)

considered use of this type of tools in the field of library/heritage information services. Gradually awoken interest in podcasts, expressed by a few farsighted authors, has, however, confirmed that podcast as a tool of information and other heritage institution services has become an interesting technological opportunity. K. De Voe (2006) suggests that podcasts are innovative solutions to be by all means taken into consideration by libraries. L. Balas (2005) highlights the fact that podcasts should not be seen as yet another massive whim. Furthermore, A. Brooks-Kirkland (2004) and K. Graham (2005/2006) both hold the opinion that this technology should be studied so that it could be used for the advancement of library instruction programs. E.K. Eash (2006) and J. Janes (2002) both emphasize that podcasts should be adopted not only because they are yet another innovation but also because they support library goals and are good tools for performing particular tasks.[2] Heritage institutions, aware of the fact that by implementing podcasts new communication channels are opened towards new users and that the entry in "the podcast world" is an unstoppable process in which a growing number of business and educational institutions have been taking part, have increasingly explored possibilities of using the tool with the aim of ensuring a more successful service provision. In a variety of heritage institution services, podcasts have thus far proven themselves to be effective tools in providing information services of heritage institutions, frequently instruction ones. In addition to that, users are increasingly interested in enriching podcast instruction and information services with visual components added to the form of information service or information training of visual learners or the types of training that views visualization of a particular unit as a more successful way of learning it.

In an attempt to successfully provide instruction and information services, heritage institutions have continuously adopted and tested various tools. In the last few years, the so called *game technology*, for a long time used in libraries in a more traditional manner, has been actualized. Current models of using the so called serious or peer designed games in the field of library instruction, or library information services in general, are part of more general interest of various types of institutions, ranging from business to educational ones, in possibilities offered by digital video games in the field of training or promotion. In addition to that, the sustained interest in game technology in the field of providing heritage information services is a response to the fact that man has always been *homo ludens*, games certainly being "a lifelong human habit".[3] Re-

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[2] See: Jowitt, Angela L. Perceptions and Usage of Library Instructional Podcasts, p. 315.

[3] Cross, Carl. Making Games Seriously: Creating a Peer Designed Video Game for Use in Library Promotion and Instruction. // Library Review. Vol. 58 (2009), No. 3; p. 215. https://proxy. knjiznice.ffzg.hr/proxy/nphproxy.cgi/000100A/http/www.emeraldinsight.com/Insight/viewPDF.js p=3fcontentType=3dArticle=26Filename=3dhtml/Output/Published/EmeraldFullTextArticle/Pdf/ 0350580305.pdf (6 May 2009)

search has also shown that, especially in highly developed societies, "playing videogames has become equally habitual as watching television, movies or reading books."[4] The complete incorporation of videogames in educational or customer service processes within heritage institutions should not come as a surprise, taking into account that "early videogames come from graduate laboratories of prestigious American universities, their primary nature being educational."[5] Although studies of the use of traditional games in the field of providing library/heritage services are rare or insufficient, heritage institutions are certainly those having a developed tradition of providing part of their services through game technologies. Taking other types of institutions as a model, heritage institutions use videogames in order to provide important services such as information as well as recreation ones. In fact, due to the development of digital technologies or more advanced possibilities of videogames in digital environment, heritage institutions have a great opportunity to serve and teach the user through a synergy of information and recreation tasks in an entertaining and relaxing way. Information services of heritage institutions can gain a great deal of advantage from videogames that incorporate certain objects or learning units in the game environment.

2.0 Reader's Advisory Services

2.0 reader's advisory services, as part of reference services, together with other related services of user education such as instruction service, have undergone a significant change within the current information environment. 2.0 reader's advisory services, as part of 2.0 library services or 2.0 information services have very interesting manifestations in the current environment. Their redefinition is a consequence of reader's advisory service redefinition that has appeared in the commercial, non-heritage environments, thus evidently becoming competition to heritage services of this kind. LibraryThing[6], Shelfari[7], Goodreads[8] and

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[4] See: BBC New Media Research. Gamers in the UK: Digital Play, Digital Lifestyles. http://open. bbc.co.uk/newmediaresearch/files/BBC_UK_Games_Research_2005.pdf (7 May 2009)

[5] Cross, Carl. Making Games Seriously, p. 216.

[6] LibraryThing is a web application of online social cataloguing used by book lovers to organize personal book collections. LibraryThing helps in creating catalogues of personal collections modelled on library catalogues. Since cataloguing takes place online, it is a joint cataloguing at the same time. LibraryThing connects people according to books they read and book reviews they share. In fact, LibraryThing enables unit tagging as well as contributions in the form of their broader reviews and evaluations. Viewing collections of other users of the tool is also possible, based on similarities of archived materials or books tagged by equal descriptors. In that way a contribution is made to the entire community of LibraryThing users. See: http://www.librarything. com (10 May 2009). The appearance of web applications for online social cataloguing such as LibraryThing has influenced the library/heritage community. Although LibraryThing as a web tool has been available since 2005, the early examples of evident connection of library catalogues and LibraryThing have been present since 2007 in the form of the project called LibraryThing for Libraries (LTFL). LTFL is based on using the data provided by personal contributions of

Literature Maps[9] offer services which are traditionally in the domain of heritage institutions, in ways relevant to and highly convenient for present day users. Web 2.0 technologies open up new possibilities in the field of reader's advisory services. Blogs and wikis are becoming spaces for providing such services. At the same time, the library catalog, traditionally closed for direct reader's advisory services, incorporating originally non-heritage tools, that is the advanced options of Web 2.0 social networks such as LibraryThing, is becoming a space for expressing user's opinions and advising readers. Abundant possibilities of the advanced reader's advisory services in the Web 2.0 environment have been confirmed by pioneer projects carried out by a large number of libraries in the field.[10] Web 2.0 have evidently contributed to highly important reader's advisory services by advancing conversation on library materials, currently held not only between information experts and users, but also among users themselves. Sources of "recommending" materials have also been upgraded and generated by various points of view, equally open to everyone. The greatest change, however, is that it has been incorporated into the library catalog, up until now exclusively accessible to information experts.

Heritage Information Services within Web 2.0 Social Network Spaces

Since heritage institutions, in the long tradition of their existence, have always been "local gathering points" or spaces for communication and specific sort of conversation, it is not surprising that exceptionally up-to-date social networks, developed as social tools within Web 2.0 technologies, are also promising in the context of activities of such institutions. Due to their potentials of informing and connecting members within a community, heritage institutions have always

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LibraryThing users. They are then used to enrich the library catalogue. LTFL is a comparatively simple way of implementing the new generation of library catalogues or the redefined WebPAC through using the user generated folksonomy in WebPAC. LTFL is at the same time a new possibility for using WebPAC that transcends exclusively traditional access points such as the author's name, title, subject and key words. The library catalogue is also enriched with annotations on library items in ways that did not exist before. See: The catalogues of The Libraries at the Claremont University Consortium Libraries that were changed using this tool and the catalogues of the first American academic libraries that have implemented LTFL. http://libraries.claremont.edu/ (10 May 2009)

[7] See: Shelfari. http://www.shelfari.com/ (10 May 2009)

[8] See: Goodreads. http://www.goodreads.com/ (10 May 2009)

[9] See: Literature Maps. http://www.literature-map.com/ (10 May 2009)

[10] See: Efforts to advance reader's advisory services in the following libraries, for instance: Ann Arbour District Library Catalog. http://www.aadl.org/catalog (12 May 2009); Carnegie Library of Pittsburgh – Teen: Updates and Recommendations from the Teen Staff here at the Main Library in Oakland. http://clpteens.blogspot.com/ (12 May 2009); Danbury Library. http://www.danbury library.org/ (12 May 2009)

functioned as multilayered, multifunctional and, above all, relevant social institutions or important social networks. The appearance of tools such as Web 2.0 will, therefore, engender another abundant possibility for the continued application of fundamental and lasting principles of heritage institutions within the redefined heritage and information service system. Heritage institutions will thus "oblige" Web 2.0 social networks by appearing in their virtual space in order to confirm their inclination to the idea of the lasting accomplishment of their mission directed towards users by different means, including penetration into the nowadays more and more interesting Web 2.0 social networks. The appearance of heritage institutions in less formal environments such as Web 2.0 social networks is a consequence of developing awareness of the importance of the so called *push* principle, to which social institutions resort in order to "impose" themselves on users in the environments in which they usually live and work. Web 2.0 social networks are also characterized by hybridization of various Web 2.0 tools, which many users find attractive. Those include real-time message exchange, enriched with multimedia components, blogging, tagging etc., which contribute to their overall popularity. Web 2.0 social networks, furthermore, allow not only multimedia enriched real-time message exchange but also a dynamic sharing and exchange of information sources among social network members in the electronic environment. Web 2.0 social networks are becoming a cultural phenomenon of today, often reserved for entertainment as well as business and educational environments, implementing relationships that virtually transcend geographical, gender, age, racial, economic and cultural boundaries. As there are numerous features heritage institutions and Web 2.0 social networks share in common (e.g. both are communication spaces), many opportunities are being opened for provision of certain heritage services within virtual spaces of Web 2.0 social networks, whose membership constantly grows. The omnipresence of Web 2.0 social networks has resulted in a large number of articles on their appearance, importance and characteristics, published in the last few years. The heritage officer community, and particularly the librarian, academic and expert ones, have written about consequences of the frequent presence of heritage institutions within Web 2.0 social networks. Certain relatively "conservative" doubts on the part of information experts are still occasionally encountered about the possibility of successful provision as well as justifiability of offering information services of heritage institutions within frequently informal and entertainment environment as certain Web 2.0 social networks are. However, the presence of heritage institutions in Web 2.0 social networks, primarily in the form of information services, is the reality of a large number of heritage institutions and a position increasingly expected and assumed by users of both heritage institutions and Web 2.0 social networks. The suspicion caused by the fear of losing the "professional" atmosphere in providing heritage information services in an informal environment is accompanied by another, greater apprehension. Namely, while providing heritage information services

within Web 2.0 social networks, a heritage information service leaves the home ground, becoming part of a completely different network. A heritage institution, or more exactly its information service, is just another helping hand lent to the user or their so called *friends*, speaking the matalanguage of Web 2.0 social networks. It is, however, up to heritage institutions to wake up to the reality of the revised information and service environment in which they are no longer the only game in town but just one participating element standing at the user's service in the environment in which the user participates in a number of social networks. In fact, it is the user around whom the entire information and service network is built up, the most up-to-date and useful services being those in his immediate surroundings. If this means that heritage institutions, in their struggle over the user's interest, for their social relevance, and finally, their survival, need to step out of their original contexts and temporarily move into the customer's context, than it becomes the reality of user service today which heritage institutions can no longer ignore. The importance of heritage institutions will not diminish if their services are offered at a "trivial" place such as MySpace or Facebook. Numerous prominent heritage institutions, having recognized the importance of active participation in networks users see as useful, attractive and entertaining, have established their presence on Facebook.

In order to keep their proximity to networks in which users take interest, heritage institutions have tested their information and service activities within the so called virtual worlds such as Second Life.[11] With growing interest in virtual worlds and the fact that an increasing number of prominent business and educational institutions[12] around the globe conduct some of their activities on Second Life, heritage institutions are establishing their Second Life presence, using this network space to test possibilities for providing some of their services, primarily information ones. In fact, information services are among the first services offered as a consequence of the presence of heritage and information institutions within virtual worlds such as Second Life, for as J. Jane suggests "give users and libraries tools they can communicate with, and the tools will soon be used for reference transactions." [13] In addition to that, in the redefined information and service environment, the user needs to be served in the space in which he usually is, as well as at the point of need, which is contrary to passive waiting for his arrival in either physical or virtual spaces of heritage institutions. Despite certain dilemmas that need to be resolved, the promotion of the so

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[11] See: Second Life. http://secondlife.com/ (19 May 2009)

[12] Among the institutions and companies are the prominent Harvard University, IBM, Reuters, Sun and many others.

[13] Janes, Joseph. 2008. Quoted in: Godfrey, Krista. New World for Virtual Reference. // Library Hi Tech. Vol. 26 (2008), No. 4; p. 525. https://proxy.knjiznice.ffzg.hr/proxy/nphproxy.cgi/00010 0A/http/www.emeraldinsight.com/Insight/viewPDF.jsp=3fcontentType=3dArticle=26Filename=3 dhtml/Output/Published/EmeraldFullTextArticle/Pdf/2380260403.pdf (19 May 2009)

called anonymity culture and being "at user's fingertips" are justified by experiments with this sort of services in virtual worlds.

Adjusting Heritage Information Services to 2.0 Information Service Environment

One relatively simple and fast way of adjusting information services of heritage institutions to the broader 2.0 information and service environment is the provision of certain heritage services along with using the possibilities of Web 2.0 tools such as blogs, wikis or RSSs. Since blogs and wikis enable exceptional user's participation and RSSs a complete information personalization, it does not surprise that these tools enabled new manifestations in the field of information services of heritage institutions. The new Web 2.0 tools are effecting evident changes within both internal communication processes among heritage institution employees and external communication processes with user communities. The importance of the blog, as a new, more participatory and truly collaborative communication tool was relatively early recognized by many information expert communities, especially librarian ones, particularly in the part dealing with the design of personal blogs[14] as communication channels for joint discussion of the influence and significance of the Web 2.0 tools increasingly present in the practice of heritage institutions. A more essential exploitation of blog potentials followed soon in the form of *institutional blogs* as tools for providing certain heritage institution services, often information ones. A great number of heritage institutions have recently begun to use blogs actively as spaces for providing their information services.[15] Reports of blog use in the field of heritage institution service provision suggest that this technology promotes internal communication among heritage institution employees and employee-customer communication as well as inter-user communication. This cooperative environment of communication carried out in numerous available ways is a principle

[14] See: For instance, some of the best known blogs for exchanging opinions and experiences of information experts related to blogs and other Web 2.0 tools that enable us to speak about the 2.0 library/heritage institution: Information Wants to be Free.
http://meredith.wolfwater.com/wordpress/index.php (19 May 2009); The Shifted Librarian.
http://www.theshiftedlibrarian.com/ (19 May 2009); Phil Bradley's Web 2.0 Blog.
http://philbradley.typepad.com/i_want_to/ (19 May 2009); Are You 2.0 Yet?
http://briangray.alablog.org/blog (19 May 2009);
Library Crunch. http://librarycrunch.com/ (23 May 2009)

[15] See only some of the successful examples: Madison–Jefferson County Public Library.
http://mjcpl.org/ (23 May 2009); Ohio University Library Business Blog.
http://www.library.ohiou.edu/subjects/businessblog/ (23 May 2009);
Kansas State University Library Blogs. http://ksulib.typepad.com/ (19 May 2009); University of Bath Library Subject Blogs.
http://www.bath.ac.uk/library/subjects/blogs.html (23 May 2009);
University of Canterbury Library, University's College of Business and Economics, The Economics Library Blog. http://blogs.libr.canterbury.ac.nz/econ.php (23 May 2009)

promoted by Web 2.0 technologies and blogs. Internal blogs of heritage institutions are becoming "knowledge management tools par excellence" or "repositories of institutional knowledge that incorporate information that would otherwise remain unrecorded. Since all participants contribute with their knowledge and experience, an internal blog is shaped by collective memory of the employee community and the recording of its good practice."[16] With equal importance, the blog is appearing as a tool of external communication with users and among users themselves or as a tool of successful provision of the upgraded 2.0 information service, which is not surprising given that "blogging is another word for conversation"[17], information service being an evident communicative and participatory act. 2.0 information service can manifest itself in the blog space as one of the most popular Web 2.0 tools as well as through an asynchronic message exchange among a number of information experts and users, where the so called referential blog becomes part of a "Question & Answer" community, whose records are then permanently stored and thus made accessible to public as information sources for other users. Apart from that, blogs frequently become advanced solutions for services such as current awareness services, for newly arrived library items, new articles in databases etc., since email user notifications are becoming less popular due to frequent inbox overload. Marketing opportunities in blog space are immense, while referring to complete texts as results of the process of responding to blog users' information requests are becoming the reality of 2.0 information service.

Library wiki, in a similar way, enables strong integration of information experts and users in providing information services, moving "virtual group instruction room" to the online environment. Users and information experts create "the world of questions and answers" within wikis, while records of these transactions ensure help not only to current users/transaction participants, but also to prospective users to whom the record of reference transactions will become an additional or initial source as well as the final, satisfactory information and reference source.[18]

Since blogs and wikis are pull, not push, technologies, the use of RSS in the blog environment and wikis makes it possible for 2.0 information service to become truly personalized and user directed, the one dominated by the push, not only the pull principle in service provision.

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[16] McIntyre, Alison; Nicolle, Janette. Biblioblogging: Blogs for Library Communication. // The Electronic Library. Vol. 26 (2008), No. 5; p. 685. https://proxy.knjiznice.ffzg.hr/proxy/nphproxy. cgi/000100A/http/www.emeraldinsight.com/Insight/viewPDF.jsp=3fcontentType=3dArticle=26Filename=3dhtml/Output/Published/EmeraldFullTextArticle/Pdf/2630260506.pdf (24 May 2009)

[17] McIntyre, Alison; Nicolle, Janette, Biblioblogging, p. 687.

[18] A whole range of wikis designed for internal communication among librarians is known today. Meredith Farkas is a prominent one. See: Library Success: A Best Practices Wiki. http://www. libsuccess.org/index.php?title=Main_Page (24 May 2009)

Conclusion

Heritage institutions will certainly advance their information services using tools such as podcasts, digital videogames, Web 2.0 social networks, virtual worlds and other tools to be developed in the future. Such developments become understandable when it is born in mind that heritage institution information services are necessarily influenced by processes of redefinition in a wider information and service environment. Wanting to remain "attractive" and up-to-date for user communities, they have a social duty, or the responsibility of continued notification and adoption of new, more convenient tools of information and communication. The appearance of new information and communication tools and their timely and rightly directed use in the context of heritage institutions effects redefinition within heritage institution information service models. The provision of heritage information services needs to be analyzed within the Web 2.0 technology environment, which enabled various manifestations of information services in the redefined environment.

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