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“With a Little Help from My Friends” – Collaboration for Digital Preservation

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Abstract

The European Union funded PROTAGE (an acronym for PReservation Organizations using Tools in AGenT Environments), a small targeted research project (STREP) in the seventh framework programme, aimed at exploring possibilities for using intelligent agents to help users in their digital preservation related problems. More explicitly, the project expected that software agents are able to gather digital preservation related know-how about technical tools and intellectual solutions; compare those to a user's particular preservation needs and recommend actions and tools to solve those. The project started in November 2008 and was finished in October 2010. This paper sets out to explore the idea of collaboration between memory institutions and private persons concerning digital preservation. Building on the views that private persons and professionals convey concerning collaboration around digital preservation, I aim to elaborate around how this collaboration should be designed.

The PROTAGE MAS (MultiAgent System) was at the later stage iteratively developed (by a development team), and tested (by test teams at the National Archives in Estonia and Sweden). For each iterative test the testers were introduced to the new version of the PROTAGE prototype and guided through the installation and testing processes. Each test comprised adding information about digital preservation tools and solutions into the PROTAGE MAS; searching and sharing information among PROTAGE users; and applying digital preservation tools and solutions on user's data. A test site administrator acted as contact point, and offered or arranged for technical support when necessary. All bugs and errors reported by the testers were entered into the error tracking system that the PROTAGE has been using throughout the development process (BugZilla). Each test week ended with individual interviews where the testers were asked for feedback and ideas on functionality and usability as well as technical aspects of the prototype. The PROTAGE MAS is thus developed in cooperation between systems designers and digital preservation professionals.

Finally, the PROTAGE MAS was also evaluated both by people working with digital preservation, as well as private users. The empirical material was gathered with the intention of evaluating the usability of PROTAGE MAS, where usability stands for “the property of being usable” i.e. it is the artefact that is being tested, not the user (Sharp, Rogers & Preece, 2007). This empirical material was gathered through workshops and individual interviews. It is the perspectives from the different users that is analyzed and discussed here. The empirical material has been analyzed by interpretative “reading” of the same, i.e. reading through or “beyond” the data in some way (Morgan, 1996). The interpretative analysis aimed at identifying trends and patterns in the material, in this case what the users expressed concerning digital preservation collaboration (Morgan, 1996; Thomsson, 2002; Wibeck, 2000).

Following the defining characteristic of usability testing, the PROTAGE project group controlled the test environment, by creating test scenarios guiding the test pilots through the use of the

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PROTAGE MAS. The usability testing approach were partially combined with field studies, insofar that the test pilots from memory institutions and agencies were asked to download the PROTAGE MAS in their natural environment. After testing, 5 of them were interviewed, 2 persons in Estonia and 3 persons in Sweden. Additionally, 6 workshops have taken place. The one in Estonia consisted of in total 30 informants, all of them attended in their role as professionals working in memory institutions, authorities or companies. Of the 5 workshops in Sweden, two were held at the National Archives, the first consisted of 6 persons (6 bulk data creators, business system users/developers, and 3 from the PROTAGE project), the second of 5 persons from digital preservation professionals/memory institutions. Three workshops were held at Luleå University of Technology, and were attended by 5, 8 and 6 private persons respectively, altogether 19 private persons.

Regarding the idea behind the PROTAGE MAS both private users and professionals saw its potentials, since it addresses functions that meet stated and implied preservation needs. It can also be noted that private users in general show a similar apprehension of the PROTAGE MAS as professionals do. Where it differs is that the professionals thinking that the PROTAGE MAS is too complicated and too technical for private persons in general – something that is not entirely agreed upon by the private users themselves. It is possible that many of Botnia Living Labs test pilots are rather advanced technology users, interested in the technological developments in society. The most mentioned area where PROTAGE MAS could be of help was migration chains, and preparing material for digital preservation in certain ways. It must also be mentioned, that even if private persons understands and able to use PROTAGE MAS, and even if the digital preservation challenge in itself is starting to engage and motivate people, digital preservation *per se* is not a fully understood area. One informant expressed expectations, that “others should solve this problem for me”.

However, the main issue concern the underlying idea of users getting help from agents, both software agents and human agents (i.e. other users, private as well as professionals at memory institutions). In the PROTAGE MAS, asking for help build on trust in other users, a user is expected to rank his/hers friends, and then the software agents acts based upon this ranking. According to professionals it is likely that memory institution will be highly ranked. Their role as national agencies is in itself a “guarantee” that the answers and solutions the memory institutions offer, is reliable, meant the informants. Overall the idea of sharing knowledges and easy access to public resources and competencies was met with enthusiasm among the informants. Collaboration around digital preservation is desired and appreciated. The burning question is how to design this so a win-win situation is created, where all kinds of users would gain from using solutions such as the PROTAGE MAS? What user group should be targeted, and what implications does this bring about? What’s in it for memory institutions, that already have knowledges and know-how in digital preservation? These are questions I aim to discuss.

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