

GroupMe! – Combining Ideas of Wikis, Social Bookmarking, and Blogging

Wiki me? Blog me? Bookmark me? ... Just GroupMe!

Fabian Abel, Mischa Frank, Nicola Henze, Daniel Krause and Patrick Siehndel

{abel, frank, henze, krause, siehndel}@kbs.uni-hannover.de

Leibniz University of Hannover, Appelstrasse 4, 30167 Hannover, Germany

Abstract

The GroupMe! system provides a novel approach to social bookmarking. It enables users to create groups of arbitrary multimedia web resources and visualizes resources according to their media type. Therewith, content of a resource can be grasped immediately. Hence, GroupMe! groups form web sites – comparable to Wikipedia pages – that users visit in order to gather information about corresponding topics. Technically, the grouping of resources carries valuable information about web resources and their relations, and can be exploited to improve the mining of web content, e.g. for search and retrieval. GroupMe! is available via <http://groupme.org>.

Introduction

In today's web there are a lot of platforms that enable people to share information in an easy way. Resource sharing systems like Flickr¹ and YouTube² allow users to share images and videos respectively. In social bookmarking systems – e.g. del.icio.us or BibSonomy³ – such resources are simply pointers to websites.

GroupMe! extends the idea of social bookmarking systems. It provides functionality to organize arbitrary web resources in groups. The groups constitute new web pages that bundle the content of contained resources. Due to appropriate visualization of resources, groups are easy to enter. They attract users who intend to read up on a certain topic – similar to Wikipedia⁴. GroupMe! groups have a dynamic nature. Therefore adding new items to a group can be compared to the feature of a blog, as subscribers of a group will be notified whenever a group changes. Altogether, GroupMe! combines ideas of Wikis, social bookmarking, and blogging, and provides an enjoyable experience for the users.

GroupMe! System

GroupMe! users are enabled to create advanced bookmark collections about a specific topic in an easy way. Those collections are called groups and may contain arbitrary web

Copyright © 2008, Association for the Advancement of Artificial Intelligence (www.aaai.org). All rights reserved.

¹<http://flickr.com>

²<http://youtube.com>

³<http://bibsonomy.org>

⁴<http://wikipedia.org>

resources that are relevant to a particular topic of a group. Groups are visualized in a multimedia-based fashion which means that rendering of contained resources is adapted to their media type. Hence, beholders of a group are able to capture the group's content immediately: they see the latest items of news feeds that are contained in such groups, they can watch videos within the group, eye images, etc. GroupMe! groups are not simple bookmark collections. Rather they are bundles of sources of information – like Wiki pages in Wikipedia – because users can consume parts of the content without visiting the resources separately.

Simplicity of creating valuable content is a key principle of GroupMe!, e.g. building and arranging groups can be done via simple drag & drop operations and is therefore easier than writing a Wiki page about some topic. Most GroupMe! groups are evolving over time. For this purpose the GroupMe! system provides functionality to subscribe to a group – e.g. via the group's RSS feed – so that users are notified whenever the group is modified. Thus, to some extent a GroupMe! group can be utilized as a blog. For example, a user may build a group in which she puts interesting *Web 2.0 platforms* in order to point the group's subscribers to these sites.

Another important concept of GroupMe! is tagging. The GroupMe! system enables users to tag both, groups and resources. Thereby GroupMe! gains new relations that can be exploited by search strategies. In traditional tagging systems meaningful relations between tags only arise whenever tags co-occur at the same resource. GroupMe! generates novel relations like relations between tags assigned to a group and tags assigned to resources that are contained in the group. In (Abel *et al.* 2007) we describe a search algorithm that takes advantage of those new relations.

GroupMe! Usage Scenario

Imagine Bob is planning a trip to the ICWSM 2008 in Seattle, USA. Therefore he decides to utilize the GroupMe! system in order to bundle all information relevant for the trip within a GroupMe! group. To build such a group Bob can employ integrated search engines in order to discover adequate resources. Adding resources to the group, arranging and re-sizing them can be done intuitively via drag & drop operations. In the given scenario, illustrated in Figure 1, Bob is dragging a photo he found via Flickr search engine into the

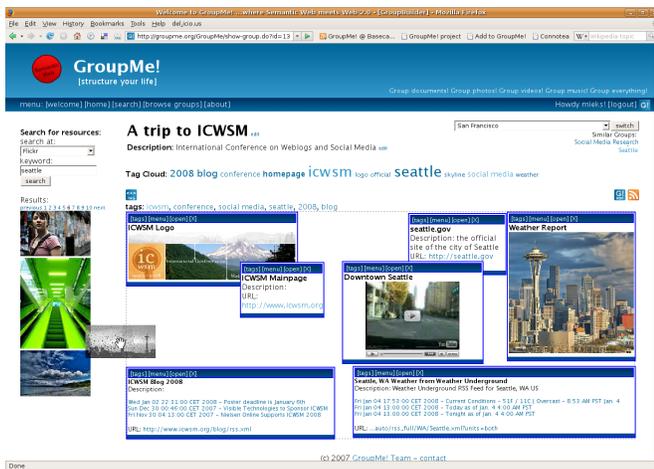


Figure 1: Screenshot of GroupMe! platform: Creating groups via drag & drop operations.

group. Before, Bob has already added some resources to the group, e.g. logo, website, and news feed of the ICWSM, a kind of sightseeing video from YouTube, or an RSS feed that informs about weather in Seattle.

GroupMe! groups are dynamic collections, which may change over time. Other users that also plan to attend the ICWSM are enabled to subscribe to Bob's group and will be notified at their *personal GroupMe! page* whenever the group is modified. Furthermore, each GroupMe! group provides an RSS feed so that users can also utilize their favored news reader to keep up-to-date about changes within the group.

Tag-based bookmarking systems like del.icio.us have in comparison to GroupMe! several shortcomings. They do not provide appropriate visualizations of resources and do not support users in creation of fix sets of resources, because they only allow to structure resources via tags. Furthermore, they do not enable users to arrange resources in a hierarchical manner, which is supported by GroupMe! system as GroupMe! also allows to group groups.

Evaluation

In the context of our evaluations we basically examined (1) how users benefit from advanced GroupMe! search strategies and (2) how they appreciate groups as content which is worth to consume. Therefore we analyzed the search behavior of the users based on 35087 search operations performed since the system's launch on July 14th, 2007. At the end of the period of collecting data there were 230 groups, which in average consisted of 4.77 resources.

Former folksonomy-based search algorithms, as e.g. presented in (Bao *et al.* 2007), are hardly able to find resources that do not have any tags. GroupMe! is able to solve this disadvantage by utilizing relations gained by the group structure. The middle column of Table 1 shows that GroupMe! increases recall without reducing proportion of relevant resources remarkably. For example, more than 25% of the clicks in the top 10 are performed on untagged resources and groups. Search strategies that just respect tags directly

Top k	Untagged Resources: Occurrences (1) / Clicks (2)	Groups: Occurrences (3) / Clicks (4)
10	40.47% / 27.46%	17.60% / 28.69%
20	49.98% / 31.68%	17.13% / 27.48%
30	53.29% / 33.70%	16.99% / 28.15%

Table 1: Analysis of the Top k search results: (1) percentage of resources/groups in the Top k not tagged with given query keyword, (2) percentage of clicks on untagged resources/groups, (3) percentage of group occurrences (4) percentage of clicks on groups.

Rank	Resource	Type	NFT
1.	Lecture 1: Semantic Web	group	66.15%
2.	Semantic Web Literature	group	72.41%
3.	Lecture 2: From WWW...	group	34.48%
4.	Semantic Web Lecture 07/08	group	22.22%
5.	Brauerei Herrenhausen	website	57.14%
6.	becks commercial	video	76.92%

Table 2: Illustration of how the most popular resources have been found. The 'Not Found via own Tag' (NFT) describes the percentage of operations in which users clicked on the resource after searching via a tag not assigned to the resource.

assigned to resources/groups would not have been able to discover those untagged resources/groups and inhibit them to become popular. GroupMe! enables also untagged resources to become popular, e.g. the most popular resource within the GroupMe! system, which is a group about the *Semantic Web*, was in more than 65% of user operations accessed after users have performed a search by using a tag, which is not assigned to this group (see Table 2).

The right column of Table 1 illustrates that users are interested in the new group concept: Groups are selected about 1.6 times more often than they occur within the search result list.

Conclusions

In this paper we have presented the GroupMe! system. GroupMe! extends the idea of social bookmarking systems with the ability to build groups of bookmarks about a specific topic. Furthermore, it provides a novel Web 2.0 interface, which visualizes such groups in a multimedia-based fashion, so that users can acquire information without visiting each resource separately. Our evaluations have shown that users appreciate such groups. Besides, users also take advantage of advanced search strategies, which are made possible by exploiting the new group structure.

References

- Abel, F.; Frank, M.; Henze, N.; Krause, D.; Plappert, D.; and Siehdnel, P. 2007. GroupMe! – Where Semantic Web meets Web 2.0. In *International Semantic Web Conference (ISWC 2007)*.
- Bao, S.; Xue, G.; Wu, X.; Yu, Y.; Fei, B.; and Su, Z. 2007. Optimizing web search using social annotations. In *WWW '07: Proceedings of the 16th international conference on World Wide Web*, 501–510. New York, NY, USA: ACM Press.