"web2.0" and "blog", since blogs are parts of the Web 2.0. In order to achieve richer semantics, we would thus establish these newly detected hierarchical connections as paradigmatic relations within the folksonomy (which in return grows to become a more formal KOS).

For communities, the use of (semi-)automatic tools may generally be an appropriate solution for tag gardening and tag suggestions (e.g., for query expansion). Tag candidates (based on power tags) may be the basis for further user discussions regarding their inclusion or their semantic relations. Thus, they are a proper means for supporting semantic enrichment of folksonomies.

Personal Tag Repository

On the personomy level, we do mainly need cross-platform solutions for tag maintenance and gardening. Someone, using different Web 2.0 tools in parallel might want to use his own terminology consistently across the different platforms. There are approaches which are aiming at these requests. The search engine "MyTag" (Braun et al., 2008) allows users to search different platforms (YouTube, Flickr, and Delicious) simultaneously. What is more, the users are allowed to restrict the search on the tags of their different platform-dependent personomies and to rank the search results according to their personomy tags. Tagsahoy! follows the same approach and lets the users search their tags with one search engine on different platforms (Delicious, Flickr, Gmail, Squirl, LibraryThing, and Connotea). For every website the user visits the Mozilla Firefox add-on "Tags Everywhere" displays the tag cloud for this website extracted from Delicious.

While these services concentrate on searching the personal tags or on recommending used tags they are disregarding the users' need for tagging consistently across different Web 2.0 services. Currently, the user has to be aware of the exact spelling variants and synonymous expressions he has used within different platforms, when he wants to retrieve documents from his collection (e.g., whether he has used the term "Web_20", "web20" or even "social_web" for tagging documents in bookmarking systems).

A potential solution would be a personal tag repository, an individual controlled vocabulary to be used independently with the different platforms. We envision a small tool which helps a user to collect, maintain and garden his very own tagging vocabulary. The user should be able to collect all tags he has used within different folksonomy systems (ideally with additional information on how often a single tag has been used in the different systems) and should then create his own vocabulary hierarchy, synonym collections and cross-references to related terms.

Motivated by this, we are developing TagCare (Golov et al., 2008) to help users to apply the same tags uniformly in different platforms.

TagCare

TagCare currently supports Flickr, Bibsonomy and Delicious; i.e. it allows a user to import his personal tags from these platforms into TagCare and to maintain them all in one place. TagCare has been developed in PHP; with JavaScript and Ajax for the user interface. It is realized as a web application (a browser plug-in is under development) and is using a MySQL database to store the information. It collects tagging data from the mentioned applications via their APIs - using the API implementations phpFlickr and php-delicious, to integrate Bibsonomy an own implementation (phpBibsonomy) had to be written. The database includes three types of data: users, tags, and tag interrelations (with the latter two always being assigned to exactly one user).

When a user signs up for TagCare he provides his login data for the different social tagging services he uses and can then import his tags from Flickr, Bibsonomy or Delicious. Basic statistics are provided on how often the user has applied single tags in total for all services and separately for Bibsonomy and Delicious - these statistics are based on usage data how often a user has applied a certain tag - as submitted by the services' API. Currently, Flickr does not provide this type of information). This can be displayed as tag cloud or as a ranking of the most frequently or least frequently used tags. This can help to detect tags which have been used too often (and thus become too general) or very seldom (which may indicate that they should be bundled with others). *Basic editing* functionalities for tags comprise renaming and deleting of tags as well as directly creating new terms in TagCare. In future, users should be enabled to predefine their preferred spelling variants (e.g., preferring singular over plural, preferring British English over American English spelling, or separating compound words by underscore or camelCase). Coupled to an underlying dictionary or even a software for speech pattern recognition, the user could be warned if he is deviating from the favored settings (e.g., using a plural form although singular is preferential).

The *advanced editing* options in TagCare concern the organization of tags. Knowledge relations between concepts are the structures that add semantics to a tag collection. The fundamental types are hierarchical relations. Hierarchies can easily be established in TagCare by drag and drop principle. Currently, TagCare does not distinguish *is_a* and *part_of* hierarchies. Furthermore, a relation of equivalence is of importance as it interlinks synonyms and quasi-synonyms, i.e. words that have exactly or almost the same meaning or can be regarded as being the same within a certain context. In TagCare, synonyms can by interlinked via a pre-defined synonymy-relation. Finally, one may label two tags as being generally related terms. This unspecified relation