A Review of Microblogging in the Enterprise

Eine Analyse von Microblogging im Unternehmen

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Summary As a worldwide phenomenon, Microblogging has gained increasing popularity. Twitter has not only attracted more than 100 Million active users in its six year history but is also said to have a considerable impact on public communication as is signified by its use during the Arab spring movement. In the corporate arena, the Enterprise Microblogging platform Yammer claims to have grown to more than 100 000 corporate users. Since Microblogging is claimed to have benefits in fostering communication and knowledge sharing within enterprises, it seems timely to take a closer look at the phenomenon. Our paper summarizes the state of the art on Enterprise Microblogging. It reviews three Enterprise Microblogging case studies and compares their key findings regarding implementation, use and created benefits.

Keywords H.4.3 [Information Systems: Information Systems: Applications: Communications Applications]; Web 2.0, Enterprise 2.0, Microblogging, Enterprise Microblogging, Knowledge Management, Collaboration

Schlagwörter Web 2.0, Unternehmen 2.0, Microblogging, Unternehmensinternes Microblogging, Wissensmanagement, Zusammenarbeit

1 Enterprise Microblogging

1.1 Microblogging on the Public Internet

Since the term ‘Web 2.0’ was coined in 2005 [14] the user-centred Internet is beginning to revolutionize the digital economy. Web 2.0 has empowered users to become publishers of information without requiring technical expertise through proliferation of a wide range of easy-to-use platforms.

One of the most prominent platforms is ‘Twitter’ (twitter.com) founded in 2006 in San Francisco. Twitter has identified a niche market by enabling people to publish content in very short messages on the Web. It only asks one simple question ‘what are you doing?’ to facilitate communication with friends, liked-minded people, and the wider public. In its seventh year of existence the platform is used by people in almost every country in the world and its service is available in 20 different...
languages. Twitter has currently more than 130 million users, and more than 340 million tweets are published every day.\(^1\)

With its concept of openness and transparency in message broadcasting (i.e. anybody can read a posted message), Twitter is successful to the extent that it founded a new archetype of Web 2.0 application: ‘Microblogging’. In the context of ‘blogging’, the term ‘micro’ refers to the limited size of the blog posts. Twitter allows published messages to be no longer than 140 characters. It now terms its service a ‘real-time information network connecting [users] to the latest stories, ideas, opinions and news about what [users] find interesting’.\(^2\)

In essence, Microblogging enabled a new form of lightweight communication, where users share and broadcast very small chunks of information about themselves, their thoughts, or anything else of interest. Basically, Twitter messages may be

- public or private (using the ‘DM’ command),
- republished by anybody (with the ‘RT’ command)
- directed to one or more users (using the '@' symbol),
- dedicated to one or more topics (by providing 'hashtags', the '#' symbol), and
- may include shortened URLs linking to resources on the Web.

Over time, Twitter has also become a full-fledged social networking platform with a simple yet powerful mechanism as it allows users to follow other users. Tweets of all followed users will then appear in one’s own timeline. As users may decide to follow back but are not obliged to do so, relationships on Twitter are per default uni-directional (similar to Google+ but different to Facebook).

Since its launch Twitter has adapted to the needs and wants of its users. Additional functionality including ‘DM’, '@' and 'RT' was integrated into the graphical user interface after users started using such commands to make up for perceived shortcomings in the platform.

Finally, Twitter allows third-party software clients to access published posts via application programming interfaces (APIs). Consequently, today most users send their tweets exclusively via their favoured computer or mobile device clients, rather than via the web front end.

Early studies in the use of Twitter have shown that people use the service mainly for talking about their mundane daily activities and for sharing information.\(^8\) While examples of business use of Twitter have been reported (e.g. in journalism), communication on Twitter is at the same time associated with largely hedonistic, egocentric, and leisure-focused behaviours.\(^13\)

1.2 Microblogging in the Enterprise

Much as with earlier Web 2.0 applications, e.g. [2], Microblogging has also made its way into people’s workplaces inside corporations [17]. Besides Wikis [1; 6; 22], Weblogs [5; 23] and Social Networking Services [3; 15], Microblogging has become increasingly popular among enterprises over the past two years.

When deployed inside the enterprise, Microblogging is capable of offering various benefits for individual knowledge workers and their organisations. Both the ‘built-in’ simplicity and the philosophy of very short messages seem to have a positive effect on the acceptance among employees, who experienced knowledge sharing as very time-consuming before [12]. Additionally, the limited length of microblog posts has the potential to keep individual information overload to a minimum and may encourage increased participation compared to other Web 2.0 applications [17]. Twitter seems to be a valuable tool to improve intra-firm transparency and knowledge sharing [7].

As organisations are increasingly interested in reducing their amounts of daily emails sent, Enterprise Microblogging and other forms of social media-based networking may become a feasible solution. In 2011 one of the leading international information technology services companies, Atos Origin, stated its ambition to become ‘a zero email company within three years’.\(^3\) At Atos Origin, managers currently spend between 5 and 20 hours every week for reading and writing emails and this limits their productivity. The most popular platform successfully transferring the ‘Twitter philosophy’ to enterprise scenarios is Yammer, which was launched as a cloud service in 2008 and has recently been acquired by Microsoft Corp. Due to its comparatively long history and strong take-up in the corporate sector, a range of academic case studies have been carried out already. The early stages of Yammer adoption have been explored by Zhang et al.\(^24\) in an anonymous case. A widely discussed case-study of Yammer is Capgemini [18; 19], which is also reviewed in this paper. Another is Yammer within Deloitte Australia [20]. Unfortunately, such academic case studies of Enterprise Microblogging are still scarce, and this paper aims to encourage other researchers to explore promising cases.

In the next sections we examine the implementation, adoption and benefits of Enterprise Microblogging. Our paper aims to summarise in Sect. 2 the state of the art in Enterprise Microblogging by reviewing three existing case studies of enterprises that are among the early adopters. In Sect. 3 we present a cross-case analysis and compare the key findings of the three investigated cases. Section 4 provides an outlook into the (potential) future of Enterprise Microblogging.

2 Enterprise Microblogging Cases

In this section, we review three existing academic case studies on Enterprise Microblogging and describe their

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2. http://twitter.com/about
initial situation, introduction process and evaluate the resulting benefits for the business.

2.1 Siemens BT

The first case is the Siemens Building Technologies Division, currently employing approximately 40,000 people worldwide [11; 12]. Siemens is well known for its ambitious efforts in knowledge management, providing a series of innovative platforms within the Intranet including Siemens-Blogosphere [4] and the TechnoWeb platform [16].

Another of these platforms is References+ (formerly References@BT), a Web 2.0 application with more than 8,000 registered users from more than 70 countries. Its goal is to support the sharing of knowledge, experiences and best practices globally within the Siemens Building Technologies Division (Siemens BT). References@BT was launched in 2005 and features structured knowledge references, discussion forums, and a social networking service.

Prior to the implementation of the References+ microblog in March 2009, several hundred Siemens employees joined a community on Yammer (yammer.com). This effort showed that there was a strong need for having an internal Microblogging solution for staff. To avoid publishing and discussing internal content on an externally hosted site, the development of an in-house Microblogging application within the company’s firewall was treated as a top priority.

Exhibit 1 (The References+ microblogging service).

The References+ microblog differs from other well-known Microblogging services in various respects. In contrast to Twitter, but similar to Yammer, microblog postings in References+ are not restricted to only 140 characters but are usually short pieces of information. References+ allows direct reply to any microblog posting and to display the resulting hierarchical structure of nested replies as a ‘topic’. Every initial microblog posting must necessarily be provided with one or more tags, which are not predefined and can be freely chosen. Tags enable the microblog to be filtered for similar content. Mentioning colleagues is possible, but due to a different data format a summarized view of all those mentions (as in Twitter) is not supported.

After the launch there was some fear of negative or useless postings and of intentional abuse, due to the fact that every user (i.e., every Siemens employee with Intranet access) is able to write and publish their own content. However, since it is impossible to post anonymous contributions in References+, there hasn’t been any intentional abuse since References+ was launched.

While the Microblogging service has done well, a series of actions were taken to raise its awareness amongst employees to get them to use it. Soon after the implementation all References+ users were informed and requested to write their own postings. They were also asked to comment on a survey via the microblog. The References+ community manager lays emphasis on personally motivating employees to use Microblogging for connecting with others. Moreover, certain postings, filtered according to defined tags, are dynamically displayed on other Intranet pages, e.g., the latest blog postings related to fire safety are shown on the Intranet homepage of the fire safety business unit. All these actions should help to spread the idea of providing employee-generated content and motivate others to contribute to References+.

To find out more about qualitative factors of why employees are using Enterprise Microblogging at Siemens BT, interviews with eight power users have been conducted. This comment nicely summarizes the key findings: Enterprise Microblogging “helps us understand and become aware of the latest news in terms of product releases, features, market enhancements [...] It is also important to understand the ongoing changes, projects delivered, business challenges, etc., in other sectors. This will benefit us in terms of knowledge, help us understand some of the best practices used in BT, and network with others” [References+ post, power user].

Consequently, Microblogging at Siemens BT is seen as an add-in for References+, to enable openness and transparency within the Siemens Building Technologies Division. For Siemens BT the microblog offers the benefit of faster knowledge sharing and improved worldwide networking. Finally, the internal microblog was released to avoid the shift of employees towards external platforms including Yammer.

2.2 Capgemini

The second case is Capgemini [18; 19]. Capgemini is a consultancy business with more than 100,000 employees in over 35 countries. In September 2008 a small group of consultants in the Dutch division started using Yammer. The group of early adopters started using the platform out of curiosity and a phase of experimentation and learning commenced to see whether the platform could be useful or integrated in the daily work practices. It became clear over time that Yammer could become a powerful means for knowledge sharing by connecting employees with each other, creating more transparency and making information easier to find.

Exhibit 2 (The Yammer Online Platform).

The Yammer platform is organized based on the concept of networks, with one network typically representing one company. Anyone can create a network for their company by registering with their corporate email address. Other users can join by registering with their corporate email address, which serves as their identifier. The Web frontend of Yammer resembles the look of Twitter or Facebook with the posting stream being the central element. Like Twitter, Yammer is based on the “follower”-principle, i.e., users can select users and are then constantly informed about their platform activities as they happen. Whenever new users join a company network they...
initially subscribe to the message streams of all users within the network. The platform also features other Twitter-like functions, such as bookmarking of posts, tagging, mentioning of and replying to other users, as well as direct messages. Since its foundation, Yammer has continually evolved. This includes both user interface and functionality and as a result, Yammer is now more similar to Facebook than to Twitter. Yammer launched as an ‘Enterprise Microblogging’ service but it has – in its own words – evolved to a full-fledged enterprise social network. Currently, more than 80% of the Fortune 500 companies and about 100 000 companies in total are using Yammer.

For the small group of Dutch consultants it was a different dynamic as Twitter and interesting to figure out what they could do with Yammer. In the first months, the number of users increased rather slowly. Six month after its start, in February 2009, the Capgemini Yammer network only counted about 300 accounts. However, shortly after a critical mass point [9] had been reached, as user numbers were growing rapidly from March 2009 onwards with more than 500 new registrations per month [19]. The motivation to join at this time is illustrated in a user comment: “As soon as I heard that this tool was being used it seemed to transcend most of the geographical boundaries I just jumped on it because of that sense of global community...”

During this period, several executives joined the service to also discover potential uses of the service for themselves. One executive remarked that he was “convinced of the benefits for the company, and more interested in identifying new application scenarios.”

An analysis of the types of communication that emerged within the Capgemini Yammer network [18] found that Enterprise Microblogging in this case is a predominantly conversational medium, where people not just post information but interact with each other. In doing so, Capgemini Yammer users are expressing views, discussing opinion and responding to each other. Yammer at Capgemini resembles a discussion space more than a stream of single posts.

Consequently, Yammer in Capgemini is neither used to inform others about themselves (like we see with Twitter) nor to inform about the immediate task/team context as is the case in the next example below. Rather, it is an open discussion space that serves the purpose of context building, information sharing and problem-solving.

### 2.3 Communardo

The third case is Communardo [21]. The 180 employees of Communardo collaborate in knowledge-intensive software development and consulting projects. Work is generally carried out in various project teams. Due to the rapid growth of the company, difficulties in sharing information and ideas between organisational units and between projects were identified in early 2008. An employee proposed to investigate the potential of Twitter or a similar service to facilitate communication within the team. This idea found support by management and a quick decision was made against a public Microblogging service and for the development of an internal solution.

Exhibit 3 (Communote). Communote is a browser-based platform, which revolves around the concept of multiple microblogs (blog streams), to which users can be added on a case by case basis. Technically it draws on Web 2.0 technology (Ajax) and design elements (i.e. a ‘clean’ look & feel). At first glance, Communote looks much like Twitter, as the key elements are the same; the posting stream is the main element, a panel with filtering and navigation options is situated on the right. However, a major difference is the drop-down list on the top. This element is used to choose the streams in which to post. So, rather than to post in one large general stream as with Twitter (where users then need to configure their own personalised streams by way of creating a list of people they follow), Communote allows to setup blogs/streams deliberately associated with projects or teams. Users are then given access to these blogs, and can decide in which context to post. A user’s start page then shows a synthesis of postings from the user’s microblogs. Then, in order to read the messages associated with a project, users can simply select the respective blog and read through the emerging stream of messages.

Adoption of Communote started in November 2008. However, in the beginning it was unclear which use cases the platform could and would support. Nearly a year later, in August 2009, a user describes this situation as follows: “So I guess there was really an uncertainty in the beginning. [...] How do I use it? [...] What is it good for?”. It was then decided by the senior executives that users should explore the potential of the platform for themselves. At the same time, the senior executives were convinced of the benefits of using the platform. They thought that emerging “success stories” should be selected to communicate new usage scenarios in which the service should be used: “The appropriation is rather self-organised. We have set no rules for what can be put in the platform, and what should go elsewhere. The phase is now coming in terms of a documentation guideline: What kind of content is to be used in the enterprise content system, for example. So what belongs in here what belongs in there, ... also for archiving and security policies, etc., is still subject to definition”.

A detailed study into Communote found that the platform had become a medium for organising task-related collaboration on a micro-level [21]. For example, Communote serves the purpose of creating awareness within the team for the immediate task context, so that when someone finishes a task someone else can take over. Also, people help each other and solve emerging problems together. Consequently, for Communardo Microblogging enables the coordination of highly interdependent everyday project work in a software engineering team.
where people work on joint work artefacts (e.g. software code) and draw on Communote to coordinate their work through task status updates, problem-solving, and task delegation.

3 Cross Case Analysis

In this section, we compare key findings on implementation, usage and created benefits from the three reviewed cases which are also available at the Enterprise 2.0 cases-study platform4. Table 1 presents selected aspects including company name, size, Microblogging scope, solution, number of users and posts, a description of use and perceived benefits.

The three organisations Capgemini, Communardo and Siemens strongly differ in size and industry. While Communardo is a German-speaking SME, Siemens and Capgemini are internationally distributed enterprises. All three companies are early adopters, Capgemini and Communardo started to use Microblogging in September 2008, Siemens began the development and roll-out of their Microblogging service in 2009. While Communardo is offering its developed solution as a product, Siemens integrated the Microblogging service into its knowledge management system References+. Capgemini uses Yammer as an additional conversation medium for interaction and discussion. Yammer is not an official tool in the IT landscape of Capgemini, but the management is allowing its use – due to the popularity and viral success of the platform. Some managerial employees were also convinced of the benefit Yammer generates, e.g. to get a feeling for what is happening in their organisation while browsing through Yammer’s activity stream. However, employees are urged not to publish confidential information such as client names, prospect names, intellectual property, or information which is confidential because it belongs to a client. Employees perceive Yammer as valuable for finding experts and they benefit from ad-hoc problem solving. Yammer also contributes significantly to the building of a shared context and inter-personal relationships.

Siemens has observed employees starting to use Yammer, but did not want them to publish confidential information on third-party platforms on the Web. So they implemented their own Microblogging service and integrated it into their knowledge management system. Employees have now three options to share their knowledge in References+: discussion forums, knowledge references and microblogs. In contrast to structured knowledge references, unstructured microblogs offer easier ways for sharing information and therefore Microblogging becomes more and more popular. Microblogging is especially helpful to bring employees together with others working on similar projects in other countries. It allows employees to understand and be aware of the latest developments in terms of product releases, features, market enhancements, and more.

Since Communardo is a small company, its Communote users know each other and share an immediate work context. Hence, they do not have to engage in context building as much as users in Capgemini or sharing of project experiences as users in Siemens BT. Instead, Microblogging has become an effective means for coordinating immediate team work and for alerting others to emerging information or events within the wider company context. Hence, Microblogging turns out to be very different in this case as compared to the large company cases.

4 The Future of Enterprise Microblogging

We have shown in three different cases, Siemens BT, Capgemini and Communardo, how and why enterprises implemented Microblogging, and outlined the wide variety of results and benefits they were able to generate. We recognise Microblogging to be widely understood

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4 Enterprise 2.0 case study platform: http://www.e20cases.org
as a new type of Web 2.0 application. While we have discussed novel platforms and proprietary systems, the established vendors of commercial collaboration software including IBM and Microsoft have also realised the potential of Enterprise Microblogging and integrated Microblogging functionality into their own Enterprise 2.0 suites.

Moreover, what has started as a simple and easy-to-use tool is increasingly becoming an integral element of comprehensive collaboration platforms that aim to provide as much (Enterprise 2.0) functionality as possible. Following this trend, Yammer has already stopped to take advantage of the term 'Microblogging' when describing its unique selling point and now marks itself as an enterprise social network. It has recently launched wiki-like collaboration capabilities and with the acquisition of start-up company OneDrum will soon allow users to simultaneously work on Microsoft Office documents. While this paper is being written, Yammer has been acquired by Microsoft Corp, and hence we expect an even tighter integration into Microsoft’s range of products.

The question arises, what will become of Microblogging in the future? While we assume enterprises to not speak of “Microblogging tools” anymore, short messaging will remain a cornerstone of Enterprise 2.0 platforms with the aim to enable employees to communicate and share information across the entrenched boundaries of organisational divisions and business functions. This is likely to yield significant positive effects on knowledge transfer as experts can be more easily identified by the nature of their contributions and information can flow outside of the established chain of command and across boundaries of corporate silos.

As a consequence, Microblogging will remain the backbone of Enterprise 2.0, but will grow from a simple tool to a piece in a new form of lightweight yet comprehensive collaborative infrastructure, ready to facilitate knowledge sharing and social networking. It is likely to become further integrated with other enterprise systems to resemble a unified stream of short message information generated not just by people, but also by machines and other software packages. Such activity streaming has the potential to feed new forms of information dashboards that allow people to stay on top of their day-to-day information and communication needs in a structured, yet relatively informal way.

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A Review of Microblogging in the Enterprise


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