

Using weblogs for discussion

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Master's Thesis
January 2005

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Master's Thesis, 66 pages
January 2005

Weblog is a form of communication and publishing in the Internet. Weblogs are frequently updated personal websites that consist of short entries that are dated and presented in a reverse-chronological order. This thesis analyses the benefits, possibilities and limitations of weblogging from the point of view of discussion. Weblogging and the concepts associated with it are defined and discussed. Then, a case study of a network of weblogs that was done to find out how discussion works in weblogs is presented. The findings of the study suggest that weblogs are a meaningful medium for discussion, though one that is not without its limitations in addition to its benefits. Weblogging was found to have many characteristics that set it apart from a discussion forum. The discussion is distributed throughout entries in several weblogs. Hyperlinks have an important role in organising and maintaining the discussion and relationships between bloggers. Functions such as comments and trackback also help maintain and organise the interaction. The distributed nature of blogging also provides challenges for readers that are not bloggers themselves. Blogging provides other interesting benefits, such as the practice of blogging live from an event.

Keywords: weblogs, blogs, discussion forums, discussion, computer-mediated communication, links, networks, Internet

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1 Introduction

Weblogs (blogs) are one of the latest and most quickly expanding forms of communication and publishing in the Internet. At its core, a weblog is a personal, frequently updated website that consists of short entries that are dated and presented in a reverse-chronological order (latest first). Like websites in general, blogs come in many different looks, styles and themes. Blogs are used as online journals, weblink filters, personal publishing spaces and news portals. Besides personal publishing, the weblogging format lends itself smoothly for use in various collaborative tasks like learning, discussion, information sharing and various collaborative publications. Blogs are characterised by both the immediacy and currentness of the entries as well as a strong sense of the blogger's personality and point of view in the writing.

The term weblog was originally coined in 1997 by Jon Barger (Blood, 2000). The shortened form blog came into use in early 1999, after Peter Merholz started pronouncing the word as "wee-blog" (in order to differentiate it from website log files). The word *blogger* is used to describe the writer of the blog while *blogging* refers to the activity of writing and publishing a blog. Since then blogging has been rapidly increasing in popularity, partially thanks to free blogging software such as Blogger (Williams, 2004) and blogging communities such as Livejournal (Fitzpatrick, 2004). Recent studies estimate that the number of blogs could be as high as 4.12 million, of which 2.3 – 2.7 million are actively updated (Wolff, 2003). As there are many free blogging services to choose from, it can be said that potentially every person with access to the Internet is also a potential blogger. For example, AOL offers blogging capacities for its members¹. As the size of Internet is growing rapidly all the time, the number of blogs is also growing with it.

One of the most interesting characteristics of the blogging community, or the *blogosphere*, is the way weblogs and bloggers interact and form relationships with each other. Blogs often have tools to support interactivity between the blogger and her readers (both other bloggers and the non-blogging audience), such as the opportunity to leave comments in entries.

¹ 35.2 million paying members in December 2003 (<http://www.aol.com>) 9.12.2003

The term discussion is used to refer to informal exchange of views and comments on some topic or a formal treatment of a topic in speech or writing. In blogs, it can be anything from blogging personal thoughts and ideas without interaction with any other person, comments on someone else's thoughts and ideas, or dialogue between two or more people. Although discussion is often seen as the latter, people can also discuss something by themselves by analysing some topic and reflecting on it.

The most common format for asynchronous computer-mediated discussion on the web is probably the discussion forum¹, which is another text-based form of communication where people can leave messages on a shared space. Messages are usually separated by topics and threaded chronologically so that the first message of a discussion is displayed first. The messages in the thread are connected to each other sequentially, and usually reference the topic or some of the other answers in the thread. Discussion forums are shared spaces for discussion and although some people may act as moderators, everyone with access to the forum is usually allowed to post answers to existing messages and make new threads. A successful discussion forum also has the chance to turn into a community where people build ties with each other over time.

Internet discussion forums have existed as long as the Internet itself. In the HCI field, there has been a lot of research on them. Girgersohn and Lee (2002) have researched discussion forums as a social environment. Preece (2000) has done research on usability and sociability of online communities, including discussion forums.

Compared to Internet discussion forums, weblogs are a new phenomenon. Because of that, they have thus far been the subject of relatively little research in the HCI field. Nardi et al. (2004) have researched blogging as a form of personal expression and communication. Although their findings emphasize the importance of blogs as a tool for personal communication and publishing, they also recognize the value of blogs as tools for community building and discussion, "Getting in conversation with each other electronically". Herring et al. (2004) have done studies to outline the properties of weblog as a genre. Their findings suggest that the majority of blogs are written by individuals on

¹ Several synonyms are used for the word discussion forum, including discussion board, discussion group, bulletin board (bbs), message forum, web forum and different combinations of these.

personal themes, but that they also offer many means for social interaction. Wrede (2003) has suggested that weblogs enable a way for both interpersonal interaction with other bloggers and intrapersonal conversation with the author's self.

The main contribution of this thesis is to define blogging from the viewpoint of discussion, computer-mediated interaction and forming of networks. Weblogs have much to offer to computer-mediated communication and thus, the needs of the bloggers and their readers as well as the limitations and possibilities of the genre are important research matters. Although weblogs probably will not realistically supersede other discussion tools, such as discussion forums and email, they come with many advantages. They offer many possibilities that could prove to be advantageous either independently or in conjunction with the use of other tools. According to Preece (2000), it is important that developers recognise the characteristics of different tasks and ensure that software is designed to support them. Interactions in weblogs are different from the ones on a discussion forum and other discussion systems, such as MUDs and chat rooms.

The purpose of this study is to examine how discussion works in a network of weblogs. The goal is to examine the possibilities and limitations of weblogging in discussion as well as interaction between users in a network. To achieve this, a case study of a network of bloggers is presented. The aim is to find out how the bloggers use their weblogs for discussion and how it is different from discussion that is carried out on a discussion forum.

One of the main characteristics of weblogs as discussion tools is the distributed nature of the discourse. Unlike on a discussion forum, the discourse in weblogs is distributed throughout several weblogs. This thesis aims to find out how that influences the discussion in the weblogs and what differences there are between that and the thread-centred discussion that is carried out on a discussion forum.

The case data gathered in the study suggest that blogging can be used as a successful discussion tool, though the fractured nature of the discussion that is carried out in entries posted over time in several weblogs can cause problems, especially from the point of view of someone who is an "outsider" in the blogging community. One interesting finding is live blogging, where bloggers use their blogs to discuss an event live using mobile devices such as laptops to

blog. The benefits and complications that are associated with live blogging will also be discussed in this thesis.

The remainder of the thesis is divided into five sections. Section 2, background, is an introduction to blogging and the concepts associated with it. It includes an overview of the common blog features, an analysis on the concepts behind blogging and an introduction to different blog types. The interaction possibilities that weblogs offer to bloggers and their audiences are also discussed on a more general level. In Section 3, the subject and the methods of the study will be introduced. Section 4 will present the results of the case study. It will define how the community of bloggers is organised and maintained. It also features a structural analysis of a network of bloggers. The characteristics of blogging conversations and discussion based on the entries will also be analysed. Section 5 will assess the value of weblogs as a discussion tool, analysing their possibilities and shortcomings. It will conclude with a comparison of the weblog and discussion forum formats, based on the findings of the case study as well as some implications for future research.

2 Background

This section will discuss the concepts associated with blogging and introduce the vocabulary that is associated with the activity. It will contain an overview of interactivity in blogging. Things like the history of blogging as well as the uses for which the technology is employed are also discussed in this section.

2.1 Overview

A blog is a website that consists of short entries made by a writer, or a blogger. The entries are arranged in a reverse-chronological order (latest entry first) by time and date, much like on a message board or a website guestbook. Usually the entries consist of the entry text itself, a title and a time/date stamp. Only the newest entries are displayed on the main blog page while older entries are usually arranged in archives where they can be accessed on a later date. Many blogs nowadays also allow readers to post comments to individual entries, much as they would do in threads on a discussion forum.

There are different styles and ways to present content, navigation and functionality. The example blog shown in Figure 1 has most of the basic elements: Reverse-chronological entries with dates and links, the calendar and the blogroll.

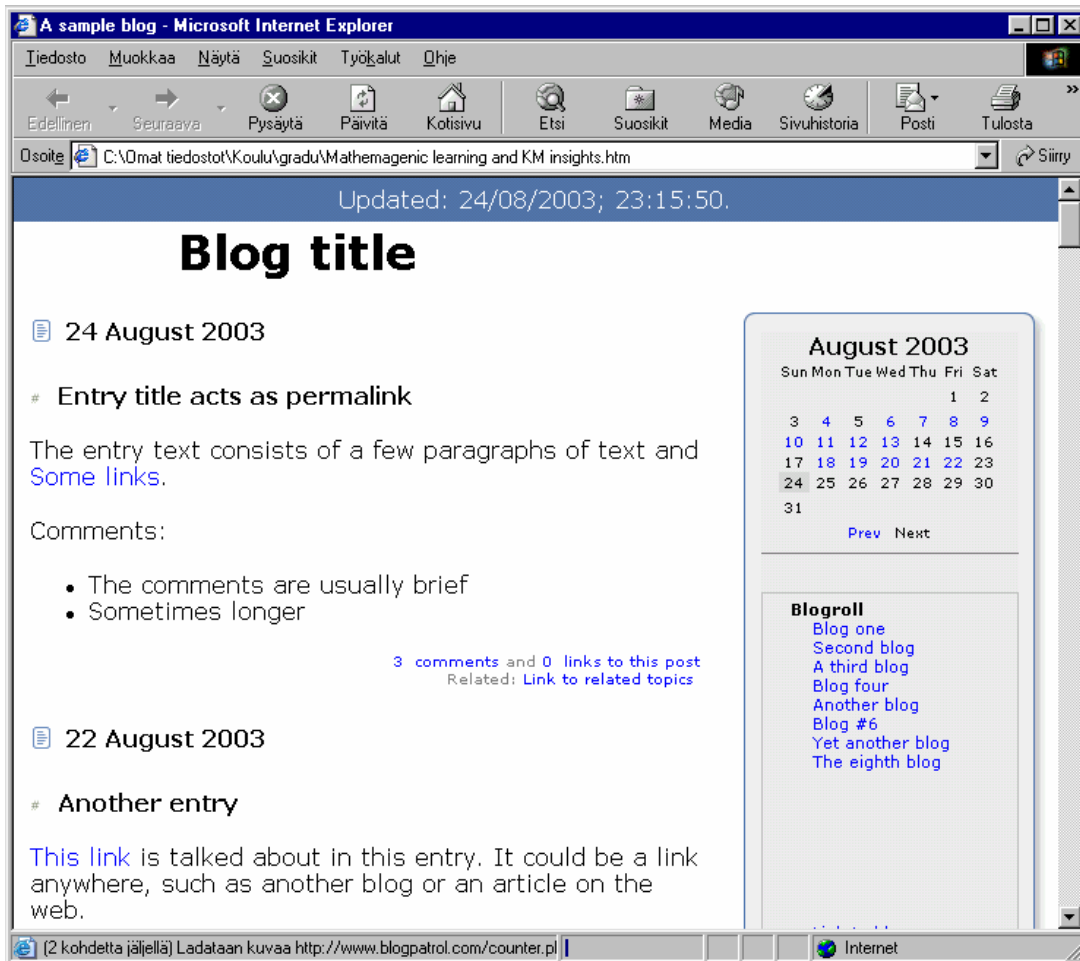


Figure 1: An example of a typical weblog

The entry (also called a post or a message) is the heart, or the basic unit, of a blog. The entries are where the content of the blog is located, and the most recent entry, displayed first on the page, is what a visitor is most likely to see at the first glance and read first.

Besides the entry text itself, entries usually have both a header and footer with additional pieces of information (Herring et al., 2003). Typical elements in an entry include the entry title, a time/date stamp and the author's name. Some blogging systems give readers opportunities to interact with the blogger in the form of *comments* that can be left in each entry. A *permalink* is a link pointing to the archived, permanent URL of the entry, done for the convenience of people who want to link to a specific entry from their blogs or other places. The permalink is sometimes displayed as a # sign; sometimes it is the link from the time of a post or the entry title. In Figure 1, the entry title acts as the permalink and comments are displayed as a link below the entry (there are three

comments to the entry on top). Figure 2 shows a sample entry where graphical symbols are used for both the comments and the permalink (in this example, there are 127 comments). Another increasingly popular element is a *trackback* function that allows the tracking of entries in other blogs that have linked back to each entry and the ability to search on similar entries based on keywords. In Figure 1, trackback is displayed after the comments (there are zero links to the entry in question).

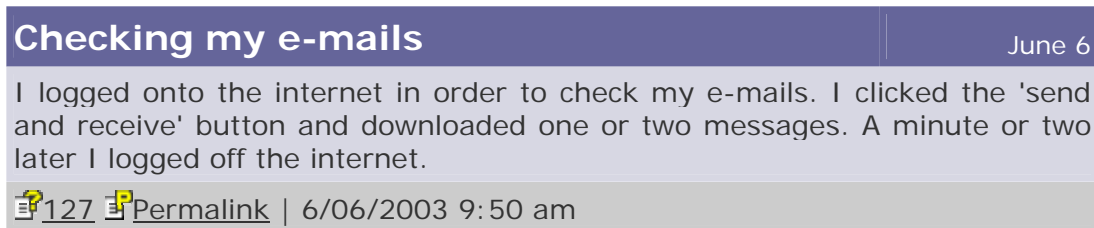


Figure 2: An example of a typical entry
 (<http://www.wibsite.com/wiblog/dull/read.php?244>) 6.6.2004

In a typical blog such as the one pictured in Figure 1, the entries are displayed in a column on the main blog page. Usually there are several entries visible, with the newest entry displayed first. Older entries are archived and can usually be accessed by scrolling through previous entries or by a calendar view, as in the blog in Figure 1 where the links in the calendar dates point to entries made on that day.

Most blogs also contain a sidebar with additional information and navigation elements, such as a collection of links pointing to other blogs or websites the blogger reads on a regular basis or considers worth of linking to. This link list of blogs is called a *blogroll*.

2.2 Blogging tools

The technical side of blogging is nowadays usually handled by an automated blogging tool or service. Normally, the use of these tools frees the user from having to write code in HTML or any other programming or mark-up language. Some Internet services offer centralized hosting and various other features to a registered user, while some of them are scripts that can be installed on the user's own server. Most of the public services are free, though paying users may receive extra features. However, blogging cannot be defined by any single technology used to create the result. In the end, it is irrelevant whether a

blogger uses an automated blogging service or writes the code by hand in a text editor and uploads each page manually.

The emergence of these tools was perhaps the most significant thing that has contributed to the increasing popularity of blogging. Among the earliest ones were Pitas and Blogger (Williams, 2004) that were introduced in 1999 and still maintain their popularity. Most blogging tools are web-based, easy to use and most of all free of charge. Thus, they provide an opportunity for “regular” people with no coding skills to start publishing content into the web. As most of the services also offer hosting centrally, the user does not have to own or pay for web space or deal with editing and uploading files. Weblogging tools can be hosted either centrally (Livejournal, Xanga), locally (Greymatter, Movable Type) or either (Blogger).

2.3 The concept of blogging

Blogging is not just about the technology used to publish the content on the Web or the visual look used to present it. In order to understand the activity, understanding the concept of blogging is as important.

While most current communication and content presentation models in the Internet mirror previously existing offline models, blogging as such isn't derivative of any single one (Siemens, 2002). Weblogs do have many characteristics that are typical to existing counterparts. Some of the suggested ones include a newspaper column, a journal, a talk radio show and a message board that all have qualities similar to blogs. The closest precedents to blogging can be found in paper diaries and chronicles, some of which were written with an audience in mind (Nardi et al., 2004).

One important characteristic of blogging is that it is something that cannot be exactly replicated in any other medium. Andrew Sullivan (2002) describes weblogging as the first model of communication that “actually harnesses rather than merely exploits the true democratic nature of the Web”. Whether or not this is true, blogging was born in Internet and not adapted from any single existing model. It probably could not be replicated outside the Web without removing something essential.

Most definitions of blogs come from the bloggers themselves. Many of them also have their own, slightly differing definitions of what constitutes a blog.

Ewan Williams, the founder of Blogger (Williams, 2004), describes the three major characteristics of a blog as frequency, brevity and personality (Turnbull, 2001). Frequency means that the blog is updated often and regularly. Brevity suggests that the information is presented in a concise, tight manner. Finally, personality means that the content of the entries reflects the personality of the blogger.

2.3.1 News blogs and link filters

Earlier articles about blogging usually described a weblog as a collection of annotated links filtered by the blogger (Blood, 2000). These types of blogs are often called *filter blogs*, referring to the practice of “pre-surfing” the Web and filtering the noteworthy links for readers. The writer of a filter blog presents links to current news articles and other places worthy of note on the web, sometimes choosing the links according to a certain theme. Such links are usually accompanied by additional commentary by the blogger.

The aftermath of the terrorist attacks on September 11th, 2001 and the following war were significant events that contributed to the popularity of blogging and its overall visibility. Immediately after the events, bloggers started to write about their feelings and post links to news articles as well as other items as they became aware of them. People started responding and in the wake of these thoughts, hundreds of new blogs sprang into existence. Some of these so-called war blogs were (and are) written by established writers and well-known journalists and some by amateurs, many of which were fed up with the generally one-sided and regulated corporate journalism. They started gathering links to interesting news articles, columns and stories and posting their own commentary and opinions on them, often in an irreverent, media-critical way (Sullivan, 2002).

Some such blogs have become popular alternative news sources, often offering viewpoints that are sometimes controversial or easily overlooked by the traditional media (Seipp, 2002). Most bloggers are blogging on their free time and are free from time and resource constraints as well as the institutional regulation that still characterizes traditional media. Some of the leading bloggers are not that far behind the media in their audiences and reach, with numbers of monthly visitors rivalling subscription bases of magazines (Sullivan, 2002).

2.3.2 Online journals

Nowadays, the term weblog is most often used to refer to online journals. These journals do not necessarily provide links or invite discussion. They are usually personal in nature and sometimes updated many times a day. Online journals can function as documents of the blogger's life, commentary on things the blogger finds interesting, means of working out the blogger's personal issues, a way of self-expression or a medium to get and stay in touch with other bloggers (Nardi et al., 2004). The entries can contain things such as descriptions of the blogger's day, random thoughts, essays, creativity or anything that the blogger chooses to write about. The slang term "haircut blog" is used (disparagingly) to refer to a journal where the writer discusses mainly rather mundane personal activities such as getting a haircut.

The two primary uses of blogging, link filtering and journaling, are not mutually exclusive. In an analysis by Nardi et al. (2004) the authors found that generally, blogs have a tendency to combine "thoughtful commentary on serious topics of general interest with revelations of deeply personal experience". These are the two prevalent content types in blogs: what goes on in the life of the Blogger and what goes on in the Internet and the world. In this regard, the content itself is irrelevant. The point of view is always that of the blogger. Even in a filter blog where the blogger only posts links to other websites and does not write any personal commentary, the blogger chooses the links according to her interests. Thus, the content reflects the blogger's personality, at least to some degree.

According to Blood (2002), the journal type blog has nowadays become more common than the filter blog. This trend can particularly be attributed to the growing availability of blogging software. According to a study by Herring et al. (2003), around 70 % of blogs are journals and only 13 % fall into the filter category. This suggests that journaling has become the "default" style of blogging and unlike previous studies have emphasized, filter blogs are actually in the minority. In fact, Herring's study¹ also challenges the perception of blogs as link filters; only slightly over half of the bloggers studied have links to external websites. The number of bloggers linking to each other's blogs is also

¹ The study included a random sampling of 203 weblogs and their entries. Links from both the entries and the blog pages themselves were included in the analysis. Blogrolls were included in the "links to other blogs" category.

around the same, while only a third of the blogs in the study include links to news sites. Of the individual entries, less than one third contain any links at all.

2.3.3 Purposes and motives for blogging

The full potential of Weblogs for use in various tasks is still being discussed and researched. Besides link filters and personal journals, blogs can be used for different purposes. In many cases, the different blogging types overlap with each other, creating hybrids that fall in between categories. This section contains some examples of different motivations and purposes for blogging.

Wrede (2003) and Mortensen and Walker (2002) are among the people who have researched weblogs as educational tools, for purposes of both teaching and learning. Schoolblogs is a community aimed for teachers and students, encouraging them to create blogs for self-expression, communication and even for projects between schools across the globe (Schoolblogs).

Another prominent type of blog is a knowledge blog (k-log), which is a blog that is written with the purpose of knowledge sharing in mind. This category contains blogs created in an organization or institution for use in various purposes, and they might be restricted to members of a specific community (Herring et al., 2003).

Although blogs mostly consist of textual information, there are also audio blogs and photo blogs, in which the blogger either posts photos or makes entries consisting of audio files. Characteristics of blogging such as frequency and personality are still fulfilled though the content comes in the form of audio or pictures instead of text.

Weblogs are usually independent when it comes to ownership and creative control. Some companies have adopted them as a part of their strategy, though this has happened relatively slowly. One of the first major companies to use blogs was Macromedia. The latest versions of its biggest programs (Flash, Dreamweaver, Cold Fusion, Fireworks) contain tools that are designed to help in making blogs and publishing them. In addition to this, a support community has been built around each of the programs. The managers of each community have their own blog where they answer user-submitted questions, and present tips and new ways to use the programs. The writing style is personal and frequent, with each manager writing as themselves, not as employees of the

company. This is true at least on the surface. The content is regulated and the company asks the managers to keep their entries on topic (Manjoo, 2002).

Despite regulations like these, the blogs have received praise from the audience that reads and benefits from them. Since then, many other companies (such as Microsoft) have adopted blogs as part of their strategy. According to the Microsoft blogs website, 60 known employees of the company author their own blogs.

Although most blogs usually have a single blogger that produces and publishes the content, some are collaborative and feature the writings of several bloggers. One example is the campaign blog of US presidential candidate Howard Dean, whose official campaign blog featured contributions of columns, links and articles from several contributors, ranging from campaign people to guest writers. In a typical blog-like fashion, the blog mixes “serious” commentary and links with free-form ruminations, such as an entry written by the community manager about losing the governor’s favourite tie. Dean’s blog is an example of a blog that is a community by itself. Besides the candidate himself, it features entries by tens of guest writers, some of which have prompted hundreds of comments and lively discussion. In addition to the blog, the website also has other features to support a community, including event calendars, contact information and link lists (Dean et al., 2004).

2.4 Linking, communities and relationships

A central part of the concept of blogging is that blogs can be seen as social web sites that allow people to come together and interact with each other. They often have features to support interactivity between the blogger and the readers, which include both other bloggers and audience members without blogs.

In some metaphors, the whole internet is described as a big social network where individual people are nodes that are connected to each other in various ways. For example, Erickson (1996) describes the WWW as a social hypertext where nodes represent people in the web. For blogging, this metaphor is especially suitable, because blogs are essentially being written by the people in the Internet. Instead of just being “behind” the web pages, the bloggers are present in their blogs as writers.

The word *blogosphere* has been coined to refer to the totality of all blogs in the Web. The term is used in a similar way that the World Wide Web is used to define the network formed by all documents in the Internet, even though there are some that are not linked to from any other document. As such, a blog is part of the blogosphere even though the blogger might not have any readers or connections to other bloggers. In addition to the blogs that are connected to each other there are many “islands”, or weblogs that do not have any kind of link to the outside world as well as abandoned weblogs that are not updated any more¹.

2.4.1 Interactivity in blogging

Comments are the most frequent way to receive immediate feedback from visitors. They also allow readers without blogs of their own to take part in the discourse. If a blogger does not want this kind of feedback, she can restrict the use of the comment function or choose to forego it altogether.

According to the study by Herring et al. (2003), around 43 % of bloggers have allowed comments in their blogs. This feature is also dependent on the blogging technology. Of the two most popular blogging tools, Livejournal offers commenting as part of its default functionality, Blogger users have to use a third-party script if they want to enable commenting.

The trackback function, which was originally a feature of the Movable Type blogging software, allows the blogger and others to keep track of the discussions in the blogosphere. Essentially, a trackback works as a method of notification between blogs. With a small ping message that is sent between servers, trackback allows the blogger and her readers to see who else have referenced each entry in their own blogs. For example if Blogger Y posts a link to an entry made by Blogger X, the trackback function would allow blogger X and her readers to see that, as well as everyone else who has commented on X's entry in their blog (Figure 3).

¹ According to a survey by Henning (2003), of the 4.12 million hosted blogs created in the eight major blogging services, 1.09 million have been abandoned on creation and another 1.63 million after an average of 126 days.

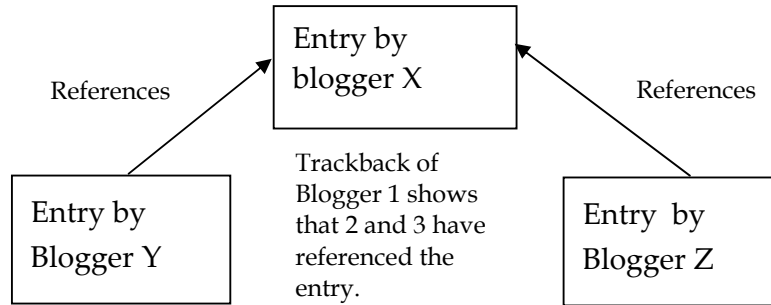


Figure 3: Trackback

Trackback can also be used to gather messages on a certain subject. Potentially, someone could set up a website collecting all the entries made about Blogtalk into one place. In that scenario, each individual blogger would setup their blogs to send a Trackback ping to a central server that would notify the blog. Anyone interested in Blogtalk could then keep track about what individual bloggers have to say about it.

2.4.2 Links and networks

Linking to other blogs functions both as a tool for social networking and establishing communities. By linking to other blogs (and being linked from them) bloggers give readers a way to find other interesting blogs while getting more traffic themselves as well. On the other hand, linking is also a way for a blogger to show his affiliations to his visitors.

Hyperlinks in weblogs can be separated into two categories. First, bloggers often post links to other weblogs they are referencing. Figure 4 is an example from an entry in the Instapundit blog (Reynolds, 2004):

[ANN ALTHOUSE](#), who is on a roll, is liveblogging the Republican convention. "My TiVo has caught up with the live feed and I can't fast forward. Aaaah!"

UPDATE: Don't miss [these](#) late-breaking comments from Virginia Postrel. And Ambra offers a [scathing review](#).

ANOTHER UPDATE: More here from [Ed Morrissey](#).

Posted at 07:59 PM by **Glenn Reynolds**

Figure 4: links in a blog entry

In the entry, the author posts links to entries by four other bloggers. He also writes some commentary on the links: The first of them is coupled with a quote from the original entry; another one is described as "scathing". This kind of writing is typical in blogs, where links are often scattered throughout the text in a free-form fashion.

Links and comments are the most common ways that relationships are established and maintained in the blogosphere. At the very least, they are the most common indicators and cues to connections between bloggers. It is not always obvious if two bloggers share a relationship that goes beyond fleeting acquaintance or a casual mention. It is probable that two bloggers that link to each other in their blogrolls also read each other's entries and sometimes comment on them. The blogroll can also contain links to blogs the blogger admires but does not necessarily read or visit. Another criterion may be link exchange, where bloggers link each other mutually out of courtesy, or because of the intention of getting more visitors. Likewise, posting an occasional link to someone's weblog does not necessarily suggest anything more than a casual connection between the bloggers. Nevertheless, several links posted over a longer period, especially mutually, can be an indication that the bloggers do share a connection with each other.

2.4.3 Blogging communities

On a larger scale, the relationships between bloggers can be combined and developed to form larger networks or communities. They can either be social

networks formed by individual bloggers that share ties with each other or communities comprising of members in a blogging service, such as Livejournal (Fitzpatrick, 2004). Some blogging services, such as Livejournal and Schoolblogs are inherently community-oriented.

Many definitions regard the community aspect of blogging as an integral part of what it is about. Winer (2001), for one, defines weblogs as “personal web publishing communities”. The description comes from the assumption that blogs are written by individuals, are published on the web and are part of a community. According to Winer, every weblog is part of a network of blogs, which are always relative to each other and the world.

In discussing blogging communities, it has to be determined what is meant with the word community. The concept of community is easy to understand but somewhat tricky to define. In sociology, the definition is usually focused on social networks of relationships, which are not necessarily restricted to a certain physical locale or geographic region (Garton et al., 1999). Preece (2001) defines an online community as something that consists of people who interact socially and have a shared purpose, such as an interest, need or service that provides a reason for the community. The interactions of people in a community are guided by policies (assumptions, protocols, rules etc.), as well as supported and mediated by computer systems that also help facilitate a sense of togetherness. Milroy (1987) describes a community as a cohesive group to which people consciously feel they belong.

Livejournal (Fitzpatrick, 2004) is an example of a blogging service where the community aspect is an important element that is built into the service. It is one of the most popular journaling services (that in June 2003 contained over 1.1 million journals, half of them active). The strong community aspects and possibilities to interact with other people are some of the reasons that draw some bloggers to start their journals. There are many other such communities and services in the Internet. In these kinds of journal communities, the journals exist and function inside the main journal community. Although they can be linked to and reached from elsewhere, blogs in a journal community are usually uniform in appearance and functionality.

Livejournal users have at least four distinct ways to support relationships with other members. They can define other users as “friends”, write shared journals (or communities), and search users according to location or common interests.

Commenting in journal entries is also allowed unless the blogger chooses to prevent or restrict that.

One of the unique features of Livejournal is that each registered user has a friends page where he or she can read the entries made by the listed friends in the order they are made. This enables the user to follow other blogs easily, without having to visit each of them individually. If anyone on the friends list of a user updates his or her blog, the user will see the latest entries on the friends page instantly. The friends list also gives the user a way to control the visibility of her entries. They can be filtered so that only the user's friends or a specific group of them can read them. This is not possible in most blogging services, where the entries are usually published to the public. Inside the main journal community, users also have the opportunity to join in sub-communities, often built around a theme of common interest. The sub-communities are essentially shared journals in which every member has the right to make entries.

In blogging communities, the strength of the network is sometimes hard to define. A close network would be one where most of the members know each other and interact regularly. *Cliques* are small, exclusive communities of closely affiliated weblogs. On a general level, a clique is a subgroup in a network the members of which are more closely tied with each other than with the other members of the network. In a sense, all networks also consist of sub-groups (Hannemann, 2001). The members of a blogging clique read each other's blogs, link to each other and are active in making comments. The interaction and reciprocating of comments as well as cross-referencing are the ties that hold a clique together.

Blogging cliques are often sub-networks in larger communities. For example in Livejournal, a small number of bloggers might all be affiliated with each other by listing each other as friends and commenting in each other's blogs. They are all part of the Livejournal community, but also presumably have a personal interest in each other's blogs, thus forming a sub-group within.

2.4.4 Bloggers and their audiences

In addition to the relationships between bloggers, other kinds of relationships exist in the weblogging world: the ones between bloggers and their readers. Readers can interact with the blogger publicly through comments or privately,

for example with email. In the case of comments, other readers can also see them and thus potentially benefit from them or have an opportunity to take part in discussion.

Some bloggers have an active relationship with their audience. For example in July 2004 Warren Ellis encouraged the readers of his blog *Die Puny Humans* (Ellis, 2004) to make logos for his blog after which he posted several of his favourites and also chose some of them for use in the blog page. Ellis has also previously asked his readers to take webcam photos (often with a certain theme), several of which he also has posted in the blog. He also frequently posts links sent to him by his readers, suggesting that he encourages and participates in active interaction with his audience. Ellis' blog, which is essentially a link filter blog with not a lot of journal-style content, does not have a comment function. Still, he invites his audience to interact with him in other ways. Another example of using blog as means for audience interaction is author Neil Gaiman, who frequently answers questions sent in by his readers in the blog on his official web site (Gaiman, 2004).

It is reasonable to assume that interaction between bloggers and their non-blogger audiences varies significantly from one blog to another. A link filter blog might prompt readers to send in web links, while a personal journal would probably not. Gaiman and Ellis are both known as authors and likely, many of the readers of their blogs are fans of their literary work.

While not all bloggers have the benefit of an existing audience that Ellis and Gaiman have, interesting blogs are likely to gain an audience consisting of people who do not have any other connection to the blogger. Most of the readers are visitors who do not interact with the blogger in any way. However, it is hard to know who these people are, how often they read and what it is that makes them interested enough in a blog to keep reading it.

The term *lurker* is used to describe someone who observes what is going on, but does not participate in producing the content. Lurkers are often occasional readers, but they can also follow a website regularly. The ratio of lurkers to participating readers is hard to define, but 100:1 is a common estimate in discussion forums (Nonnecke & Preece, 1999). In most weblogs, the ratio might be even higher, though it is hard to know for sure. It is likely that the number varies greatly from an individual blog to another and that it depends a lot on the audience and popularity of a blog. A frequently updated blog with a good

writer has the potential to attract a large readership, while some other blog might have a small but active audience consisting of close friends.

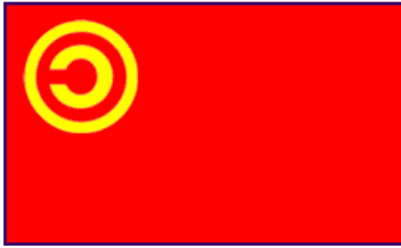
The writing style of blogs is usually personal, and this often translates into a writing style that does not necessarily involve the audience or invite discussion. This is true especially in journal blogs, in which entries are published diary entries. Despite that, most bloggers write in first person instead of a narrative style. They have themselves as a subject (“I think”) or include the audience (“we should see”) at least some of the time. This alone gives the audience awareness of the user and her opinions, interests and personality. Most bloggers seem to be aware of the audience they are writing for, though they do not necessarily claim to write with the audience in mind.

RSS (*Rich Site Summary* or *Real Simple Syndication*) is a tool that allows people to distribute content online almost instantly. RSS is received through a news reading program, which searches through published RSS content that the user has subscribed to and downloads them automatically. Bloggers are among the people embracing the use of RSS, since it allows an easy way to distribute entries to people. From the reader’s point of view RSS allows them to follow the entries of subscribed blogs in a similar way to a Livejournal friends page mentioned in chapter 2.4.3. Besides blogs, RSS is also used by many newsletters and news sites as an alternative to email. On a website, RSS capability is most often signified with an orange XML button. Some other services, such as Yahoo! also offer syndication features (Figure 5).

Lessig Blog

syndicate (?) this blog: [XML](#) [ATOM](#)
[+ MY YAHOO!](#)

what a total (intellectual) disappointment this man is



If I had the time, and the money, I'd do the deep analysis that it would take to explain to myself why it is I constantly hope to be surprised by Mr. Gates. Yet I never am. Here's [BoingBoing](#) reporting the [red-baiting of Mr. Gates](#).

It's one thing to read this sort of thing from a studio exec, or head of a record label -- surrounded as they are by the sort that surround them. But the people I've met at Microsoft are miles beyond this sort of silliness. Does Mr. Gates not even talk to them?

posted by [[Lessig](#)] on [[Jan 6 05 at 8:47 AM](#)] to [[free culture](#)] [[19 comments](#)] [[post diffusion: 8 trackbacks + technorati](#)]

Figure 5: A blog with the button used in RSS feeds and other syndication features (Lessig, 2004).

2.5 Previous research

Weblogs have so far been subject of little research although the interest in the phenomenon is constantly growing. The first weblogs were set up in the late nineties and it has only been in the last three or four years that weblogs have been rapidly growing in popularity. The tradition in weblog research is new and the methods used for the research have mostly been adapted from the field the research has been done in. This has led to a wide variety of approaches to researching blogs. In the HCI field, most of the research has been either quantitative research on characteristics of blogs (network research or studies of links (Herring et al., 2004)) or qualitative research on blog entries (Krishnamurthy, 2002). Interview methods and ethnography have been employed in studying the habits and viewpoints of the bloggers (Nardi et al., 2004; Henning, 2003).

Nardi et al. (2004) have done ethnographic studies on bloggers' blogging practices and come up with different reasons for blogging. Their methods consisted of interviewing the bloggers and doing both quantitative and qualitative analysis of blogs. The sample consisted of 23 informants and their public blogs. One of the primary reasons they found for blogging was

community building, or “getting in conversation with each other electronically”.

Krishnamurthy (2002) has studied blog entries regarding September 11 based on that, proposed a classification for blogs into four types along two dimensions: personal – topical and individual –community. These classifications are also valid today, though the blogging community has changed and expanded since 2001 and the lines between personal and topical, for example, are often blurred.

Henning (2003) has done a survey on the size and demographics of the blogging community and the people participating in it. He found out that of the approximately 4.12 million weblogs hosted on the eight leading blog hosting services at the time of the analysis, as much as 66 % had been either permanently or temporarily abandoned. Since creating blogs is easy, it seems that many start them without actually continuing to commit to updating them regularly. According to his survey a majority of blogs was started by teenagers or people in their twenties with a minor favour towards female bloggers (60 %). He also raises the distinction between the “blogging iceberg” – popular blogs with tens of thousands of daily readers that are updated frequently and millions of blogs with “nanoaudiences” consisting of friends and family members.

Using both quantitative structural methods and qualitative content analysis of a random sample of 203 weblogs, Herring et al. (2004) have studied blogging as a genre of computer-mediated communication. Their study included things such as reasons for blogging, blog feature usage and frequency of linking and commenting. They found most of the weblogs in their sample to be online journals, and that they shared characteristics with offline genres such as diaries and newspaper editorials. They also compared weblogs with other online and offline types of publishing and discussion, placing them somewhere between asynchronous discussion forums and standard webpages. According to them, blogs share features with both types of web publishing and discussion and “bridge the technological gap” between the two. For example blogs offer the multimedia elements of web pages but also give readers some communication rights in form of comments. They found out that commenting and inter-blog linking was not as common as their previous perceptions of blogging had lead them to expect.

Besides that, weblogs have gathered interest as a subject for research in several other fields including communication studies (Thompson, 2003) business (Röll, 2003) and education (Wrede, 2003). Wrede writes about the nature of weblog discourse and the use of weblogs for educational purposes in university courses. The author's ideas about weblogs in discourse are mostly theoretical and based on personal observations and ideas of contributors, but interesting and relevant regarding the themes studied in this thesis. He points out some benefits, such as ability in acting as filters for web content and a way for educators and students to interact using a shared format as well as to encourage expressing standpoints "openly and continuously". He also brings up challenges in building communities of active interaction, most notably the reliance on the participants actually participating in it.

2.6 Summary

People have varying perceptions of blogging and as a genre, it is still going through changes as both new technologies and ways to blog become more and more common. Blogging can be defined in several different ways, each of which emphasizes some aspects over others. Some characteristics of blogs are usually considered core features of the genre. In this thesis, a site is referred to as a weblog if it has the following features:

- Frequent

A weblog is a continuing publication that is updated at least somewhat frequently. The frequency varies but is usually at least once a week, sometimes less often, sometimes more often depending on the blogger.

- Brief

The entries of a blog are usually free form and brief, ranging from a few sentences to several paragraphs.

- Reverse-chronological, dated and archived

The entries of a blog are arranged in a reverse-chronological order, with newer entries displayed first. Older entries are usually archived and often assigned a permanent hyperlink (permalink) that can be used to reference them.

- Personal

A blog is written and maintained by a blogger who has the ownership, responsibility and creative control of her blog and writings. The content of the entries focuses on the blogger and her interests (Herring et al., 2003). The creation and running of a blog is dependent on the author. If she stops blogging, someone else cannot do it for her because the blog stops being *her* weblog. In some cases, there are more than one bloggers blogging collaboratively but their individual entries are usually distinguishable from each other.

- **Linked**

The blog entries often contain references to other documents in the WWW in the form of text and hyperlinks as well as references to offline sources and events. Blogs also contain references and links to other weblogs, either in the entries or in link lists and blogrolls.

3 Research question and methods

Based on the literature review, the tradition in weblog research is still very young. The methods used for the research have mostly been adapted from the existing methods used in the field the research has been done in. This has led to a wide variety of approaches to researching blogs.

The results from previous research and subjective evaluation have already suggested some traits and characteristics of weblog-mediated discussion. These characteristics were discussed in section 2. A case study was planned in order to study these characteristics more closely. In order to study how the distributed nature of weblog-based discussion works, a network analysis was applied to a network of blogs that had a common affiliation. Links, comments and entries were analysed with regard to frequency in order to determine the discussion activity. To analyse the discussion style, subjective qualitative analysis was done on the blog entries. A few examples chosen to illustrate the qualities those typical blog entries possess.

Since the goal of the thesis is to analyze the use of weblogs for discussion, it is necessary to include some comparison with some other discussion systems. As discussion boards are probably the most common way of asynchronous communication in the Internet, a forum was chosen as the comparison because its prominence as an asynchronous web discussion tool. Like in blogs, the threads on a discussion forum also can be easily accessed because of their textual and archived format.

The network of blogs for this study was taken from weblogs of the participants of the Blogtalk 2003 conference. The blogs in the sample are authored by participants in the conference. In order to give focus to the qualitative part of the study, it was limited to entries that concerned the Blogtalk conference. The CHIplace discussion forum was chosen for analysis to provide comparison with Blogtalk. The board offers a good basis for comparison as a different kind of system used for the same purpose: discussion and notifications pertaining to a conference. The Blogtalk conference incorporates weblogs for these purposes, while CHIplace uses a message board system together with periodical notification e-mails.

Due to the differences between the discussion board and weblog formats, there are some things that have to be taken into account when comparing them. In both discussion forum and blog the basic unit of information is the entry. However, a discussion forum has two additional levels of hierarchy: the topic and the board. A large forum can contain several boards on different subjects. On a forum the entries exist inside a thread or a topic of which there are several inside a forum, while in a blog they are arranged reverse-chronologically without topical threads. Furthermore, in addition to the regular entries made by the blogger, the blog can contain comments that can be made by visitors.

The study by Nardi et al. (2004) suggests that discussion and community-building is successful when the participants self-identify as a community and maintain reciprocity in commenting, linking and interaction. However, discussion is not as successful when the people do not participate on their own accord. Also, project or event-oriented communities tend to be tied to a certain time, and the flow of discussion is interrupted when the project or event is finished. Since Blogtalk is also an event of two days, the linking and commenting activity will be analysed in relation to the time of the conference. Herring et al. (2004) also bring up the importance of comments and links, but also point out that they are not as widely used than the previously existing ideas on blogging have led us to believe. The majority of the blogs in their study were discovered to be personal diary-type journals with little interaction with others, in some cases none at all. The amount of links and comments in the Blogtalk network as well as their distribution between the network of bloggers will be analysed.

3.1 Description of the case study

Blogtalk is a weblog conference that was held for the first time on May 23-24, 2003 in Vienna, Austria. The goal of the conference is "to survey the status quo of Weblogs or Blogs as tools for professional and private use" and "to boost the awareness of Blogs as proper means for diverse modes for personal and collaborative publishing". In addition, [the participants] "will talk about future applications and uses within a business or educational context". Compared to some larger conferences, Blogtalk is rather small in scale with 20 people providing presentations. There are plans to make Blogtalk an annual conference; Blogtalk 2004 was held in July 2004.

The weblogs in the analysis were taken from the blogroll on the Blogtalk website. The blogroll on the website will be used as the “hub” for the network from which all the other weblogs are linked. Out of the panellists, four did not appear to have blogs, with a link to either a personal or a company website listed instead. The rest had either a personal or a shared weblog, bringing the number of the Blogtalk presenters’ weblogs to 17. There were also other participants such as staff members and people acting as chairs in the panels in the conference. Some of them had weblogs, but they were not linked from the blogroll.

The phrase “Blogtalk network” will be used in this and the following sections to refer to the weblogs in this analysis. The phrase is used here to refer to the weblogs that are connected to each other with the Blogtalk network as the common denominator. Some of the bloggers associate more with each other than some others, and most of them are likely to have other interest groups, which with they are more closely affiliated. In that regard, the Blogtalk network is “created” for this analysis for analysing weblogs as a discussion channel for the Blogtalk conference.

The website for the Blogtalk conference follows a blog format, though it has some additional features. The main weblog area consists of reverse-chronological entries made by the maintainer, while the other sections of the site include information on the conference itself, such as the program, biographies of the organisers as well as press articles and links. The Blogtalk website also hosts a section where two students blogged their thoughts live from the conference.

Figure 6 shows the upper part of the Blogtalk website main page. The left side contains links to different sections of the site while the right side contains a blogroll of the participants with accepted proposals. The upper middle part contains some general information while the blog is located down from it.

DONAUNIVERSITÄT KREMS

BLOGTALK

A EUROPEAN CONFERENCE ON WEBLOGS

Web-based publishing, communication and collaboration tools for professional and private use

Updated: 22/05/2003; 14:11:22

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Microsoft ORF.at TECH GATE VIENNA UNIVERSITÄTSLEHRGANG Content Editor UTA SILVER SERVER Österreichischer Journalisten Club Austrian Journalists Club twoday.net

BlogTalk - A European Conference On Weblogs: Web-based publishing, communication and collaboration tools for professional and private use.

Home

Goal of the conference *What is a weblog? A weblog is a form and a format: a frequently updated website containing entries arranged in reverse-chronological order. But this simple form is infinitely malleable, and weblogs have huge potential for professional and private use. Easily maintained via computer or mobile devices, weblogs are organizing businesses, creating and strengthening social ties, filtering the World Wide Web, and providing a platform for ordinary people to publish their views to the world. (Rebecca Blood) [more by George Siemens]*

Press corner

live blogging

People

Program

Registration

Presentations

FAQ Rebecca Blood helped with evaluating the submitted proposals; Max Scheufl helped with the initial brainstorming and evaluation of the submitted proposals.

Accommodation

Books

Call for Participation

Contact

Accepted proposals:

Gabriela Avram
Oliver Wrede
Jose Luis Orihuela
Philip Wolff
Ulrich van Stipriaan
Gernot Tischertou
Christian Langreiter
Jeremy Cherfas
Lilia Efimova
Gilbert Cattoire
Fernando Tricas
Juan Julian Merelo
Dan Gillmor
Steve Cayzer
Henry Copeland
Maria Milonas
Martin Röhl
Hossein Derakhshan
Sebastian Fiedler
Andrius Kulikauskas
Ethan Eismann
Mary Hodder

LG Präsentation

multimedia reader.at

BIT

Other relevant dates:

- Registration is on 5/23 from 8-9:30

Venue:

Tech Gate Vienna Wissenschafts-und Technologiepark GmbH
Donau-City-Straße 1
A-1220 Wien

Trackbacks and Neighborhood:

Technorati Tel. +43-1-20 50 1-11-0
Fax +43-1-20 50 1-11-900

blogdex

How to get there

Figure 6: Blogtalk main page

Figure 7 shows a view of the CHI 2003 General Discussion forum at CHIplace. The CHIplace forum is arranged into several sections that include topics such as HCI general, HCI conferences and Job market. Besides the discussion board, each section has links to the documents belonging to each section.

The screenshot shows the CHI PLACE Online Discussion Forum interface. The top navigation bar includes links for HOME, Register, and Sign-in. Below this, there are tabs for HCI conferences, HCI general, Hot Topics, Job Market, CHIplace, My membership, and Members. The main content area is titled 'CHI 2003' and features a 'General Discussions CHI2003' section. A table lists various discussion threads with their topics, authors, and dates.

topic	topic starter	last post
To CHI or not to CHI? Boycott or Support our American colleagues?	Gilbert Cockton	Jun 1 at 23:59
CHI2004?	Steve Portugal	Apr 28 at 23:47
Exertion Interfaces Talk	Florian 'Floyd' Mueller	Apr 23 at 6:10
Map: restaurants close to convention center	Sean Savage	Apr 7 at 14:03
Good restaurants very close to convention center	Sean Savage	Apr 6 at 16:26
Fort Lauderdale tips from a native	Sean Savage	Apr 6 at 9:49
Riverwalk in Downtown Fort Lauderdale	Theresa Muth	Apr 4 at 20:15
Local Tips	Theresa Muth	Mar 31 at 14:07
List of Ft. Lauderdale WiFi hot spots	Sean Savage	Mar 29 at 15:01
How to get the most out of CHI or any conference	Scott Berkun	Mar 26 at 20:47
Reporting HCI for UsabilityNews	Ann Light	Mar 4 at 14:23
CHI 2003 Advance Program: what time is it?	Mark Notess	Feb 5 at 7:45
New to CHI	Amber DeRosa	Jan 14 at 11:52
Great Start for CHI 2003	Gilbert Cockton	Nov 22, 2002
Are you experienced? Sign up for CHI reviewing by 9/15	Tom Erickson	Sep 9, 2002

All times in CDT (GMT-05:00)

Figure 7: CHIplace forum

The section of CHIplace that has the CHI 2003 discussions is found under the heading HCI conferences. The CHI 2003 section is in turn divided into thirteen boards such as “General Discussion” and “Paper Discussions”. Each board hosts one or more discussion threads and registered users can post new threads. Compared to the Blogtalk website, the CHIplace forum is somewhat harder to navigate. Sometimes it is hard to know which links lead to the message board and which ones lead to other sections of the site, for example.

Instead of a blogroll, CHIplace offers a member directory in which registered members can (and are encouraged to) write details about themselves such as location and research interests. They are even allowed to upload pictures that are randomly displayed on the member directory page. This gives them the opportunity to offer some context to the entries they make on the discussion board. Still, bloggers have the advantage of actually having the ownership of their blogs, which gives them many opportunities to personalise them, if they choose to do so.

3.2 Data collection and analysis

The gathering of data for the analysis was done mostly during July and August 2003, weeks after the Blogtalk conference. All of the blogs in the analysis had archives of the older entries, which were accessed for the gathering of the data.

For the analysis, individual blog entries in the personal blogs of each of the Blogtalk network members were followed during four weeks. Some additional data was collected at later dates. Qualitative data was collected about the entries and the entries themselves were observed and saved. The entries that were taken into account were made during a period starting two weeks before the conference, which was held on 23 - 24 May, 2003 and ending two weeks after it. Although the discussion on the subject of Blogtalk has probably spanned a larger period of time than just the four weeks, some kind of cropping was deemed necessary especially because of the large number of weblogs and individual entries in the analysis.

There was no mention of Blogtalk in four of the 17 blogs in this analysis during the four weeks, although it is possible there were some mentions outside the time frame. For the analysis, the entries of the blogs were read and checked for mentions on the Blogtalk conference. The links and comments in the entries were recorded. For CHIplace, a similar observation was done for the threads on the board.

Since the names of the bloggers don't have any consequence, it is not necessary to use them unless there is a specific reason (i.e. quoting someone's writing). Each blog was assigned a code according to the alphabetical order and they will be referred to by that in the following sections. To avoid mistakes, the number was also paired with a letter representing the blogger's surname (for instance 1ca).

3.3 Ethical issues

Since blogs are published on the Internet but written by individuals, there is a question whether or not their content is part of public domain or the property of the author. All of the bloggers in this analysis have written their blog entries publicly and, in most of the cases, using their own name. Despite that, they might not expect to be subjects of research. Moreover, although entries in a blog and a discussion forum can be compared to an article published in a newspaper or a speech given in public, there is a psychological difference between the two and people may have a false or exaggerated sense of privacy in online environments. This is especially problematic in forums dealing with sensitive and personal topics such as health issues (Eysenbach & Till, 2002; Frankel & Siang, 1999).

In this thesis, it has been generally assumed that since blogs are a form of publishing, they fall in the public domain. However, care has been taken to respect the rights of the bloggers. Quotations from blogs have been chosen so that they don't breach an individual's right of privacy. Personal identity and information that has been deemed as being possibly private or sensitive in nature has been left out. Also, the level of information analysed in this thesis deals mainly with the technical aspects of the blogs and blog entries, without delving too much into the content of the entries themselves. Personal information of the bloggers, such as age or sex, have not been analysed in this thesis.

4 Case study of linking and discussion

This section will present the findings of the Blogtalk study. Although the emphasis is on Blogtalk, comparisons with the CHIplace forums will be included. Section 4.1 will introduce and discuss the characteristics of the blogs in the sample. Section 4.2 will analyse the links in the network. Both the blogroll links and the links on the discussion entries have been taken into account. The discussion frequency is analysed in 4.3 and the comments made by the bloggers in each other's blogs in 4.4. In 4.5, an overview of the activities on the CHIplace board is provided. Section 4.6 discusses the activity of live blogging from the conference, and 4.7 compares a discussion forum thread and a blogging discussion using examples.

4.1 Characteristics of the blogs

Blogtalk is an international conference with participants from different countries and nationalities. Thus, many of the blogs in question are written (completely or partially) in a language other than English. In this paper, instead of taking the chance of misunderstanding something, mostly only blog entries written in English have been analysed. Two of the bloggers each have two blogs written in separate languages and in those cases, the English blog is used. One of the weblogs is bilingual, with entries written in both Polish and English. Some of the weblogs are collaboratively written by two or more people but the entries analysed are written by the person whose name is listed on the Blogtalk website. That person is also considered the author of the blog in this analysis, unless stated otherwise. One of the blogs had no entries since April 2003 and one of them was down (with notice) as of August 2003, but its entries were read through previously and they contained no references to Blogtalk.

Table 1 collects some of the most common blog features and their occurrence in the Blogtalk blogs during the time of the study (June 2003). It also contains statistics about the language of the blogs, which were not all written in English.

Table 1: Blogtalk blogs (N=17)

	frequency	percentage
<i>features</i>		
comments	15	88 %
trackback	8	47 %
blogroll	16	94 %
<i>language</i>		
English	11	65 %
Bilingual (English/Polish)	1	5 %
German	3	18 %
other	2	12 %

4.2 Linking

As discussed before, linking is a central part of blogging. There are two kinds of links: the blogroll links that support the network and connections of the blogger and the entry links, which both re-establish the blogger's relationships and give context to the things the blogger blogs about. This section analyses the Blogtalk network from the point of view of linking.

4.2.1 Blogroll links

Most of the weblogs in the Blogtalk network have either a blogroll or a link page with hand-picked links by the blogger, though sizes and styles of the blogrolls are different from each other.

Figure 8 is the visualization for the network that is established through the blogroll links of the Blogtalk blogs. Each circle represents a blog and the arrows represent links from the blogrolls of each blog with the starting point coming from the weblog that has the link and the ending point going to the weblog the link targets. In the case of two-way links, the weblogs link to each other mutually.

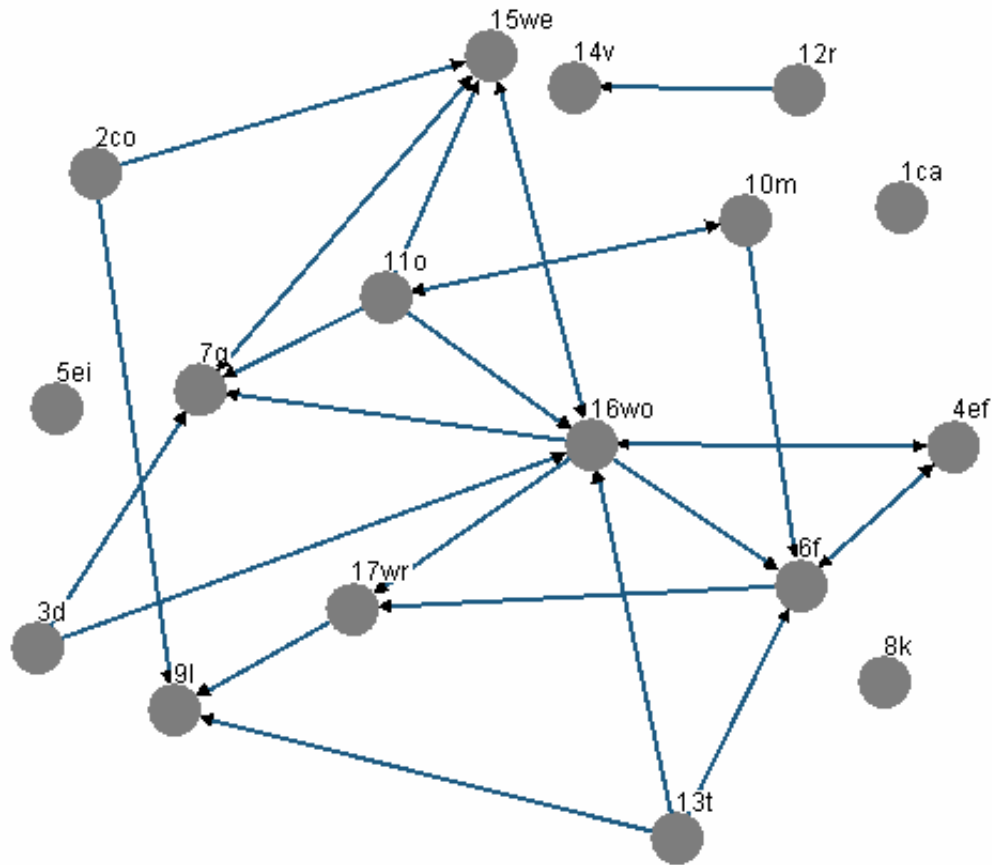


Figure 8: Network of blogroll links

Among the Blogtalk participants, there are bloggers that do not have a blogroll. Some of the weblogs are “outside” the network in the sense that they don’t offer links to any other blog nor are linked to from any of them. Out of these outsiders, only one doesn’t have any links in a blogroll or a separate link page at all. One of the weblogs is a community weblog; i.e. it exists within a community and only has links to other weblogs in that community.

The two tables below show a breakdown of the blogroll links inside the Blogtalk network. Table 2 shows the frequency of the links each blog has to other blogs inside the network, and Table 3 shows how many links they receive in return.

Table 2: links to other blogs in the network

links	frequency (blogs)
0	5
1	3
2	6
3	1
4	1
5	1
6	0
<i>total</i>	<i>17</i>
mean 1.6	mode 2
	range 0-5

Table 3: links from other blogs in the network

links	frequency (blogs)
0	7
1	3
2	2
3	1
4	3
5	1
6	0
<i>total</i>	<i>17</i>
mean 1.6	mode 0
	range 0-5

As can be seen, the average number of blogroll links inside the network is rather small, with only 1,6 links on average to the other blogs in the network and the same number back. This signifies a loose connectedness inside the network. The distribution of received links in the community isn't completely equal. Half of the blogs don't get any blogroll links at all from the other blogs, even though their blogrolls contain links out to other weblogs in the network. There are some blogs that receive more links than others which shows that some of the blogs are more popular as recipients of links.

Out of all of the blogroll links in the analysis, 30 % are mutually reciprocated. This means that in many cases, it is possible to get from a weblog's blogroll to another weblog, but not necessarily vice versa. Although one can navigate the network to get from a weblog to another, all of the routes are not two-way. For example one can navigate from **4ef** to **17wr**, but not vice versa. Although all of

the blogs in the network are connected from the central hub of the Blogtalk website, most of them don't have a link back to the website in their blogrolls.

The links to weblogs in the Blogtalk network only make up a rather small portion of the total number of links in each individual weblog. There is a lot of variation between the number of links in the individual blogrolls. The typical size of a blogroll falls between 10 and 60 links. However, some bloggers seem to value quantity; four of the blogrolls have over a hundred links. Only one of the blogs in the analysis does not have a blogroll. Although the weblog with the most links in and out inside the network has the biggest blogroll (over 500 links), there doesn't seem to be any large correlation between the size of the blogroll and the linkage inside the network, as only a small portion of the links in each blogroll points to the blogs in the blogtalk network. That shows that as a community, the Blogtalk network is not an established one and most of the bloggers have stronger ties to other places.

One thing this study doesn't take into account is the chronology of the links. There is no history information in the blogrolls, so it's not easy for an outsider to determine whether or not the Blogtalk conference, for example (or any other such event with the potential of having bloggers become aware of each other) has influenced the linking in any way. Although some of the bloggers probably knew of each other before the conference, it is likely that some of them have linked to each other after they have met face to face in Vienna.

In the blogtalk network, there are different kinds of linkers and linkees (Table 4). Some of the blogs, such as **16wo** and **6f** are "hubs" that contain more links to and from them than the others. Some blogs get a lot of links from outside (**6f**, **7g**, **15we**, **16wo**) while some link to other blogs, but don't get as much links in return (like **3d** and **13t**, for example).

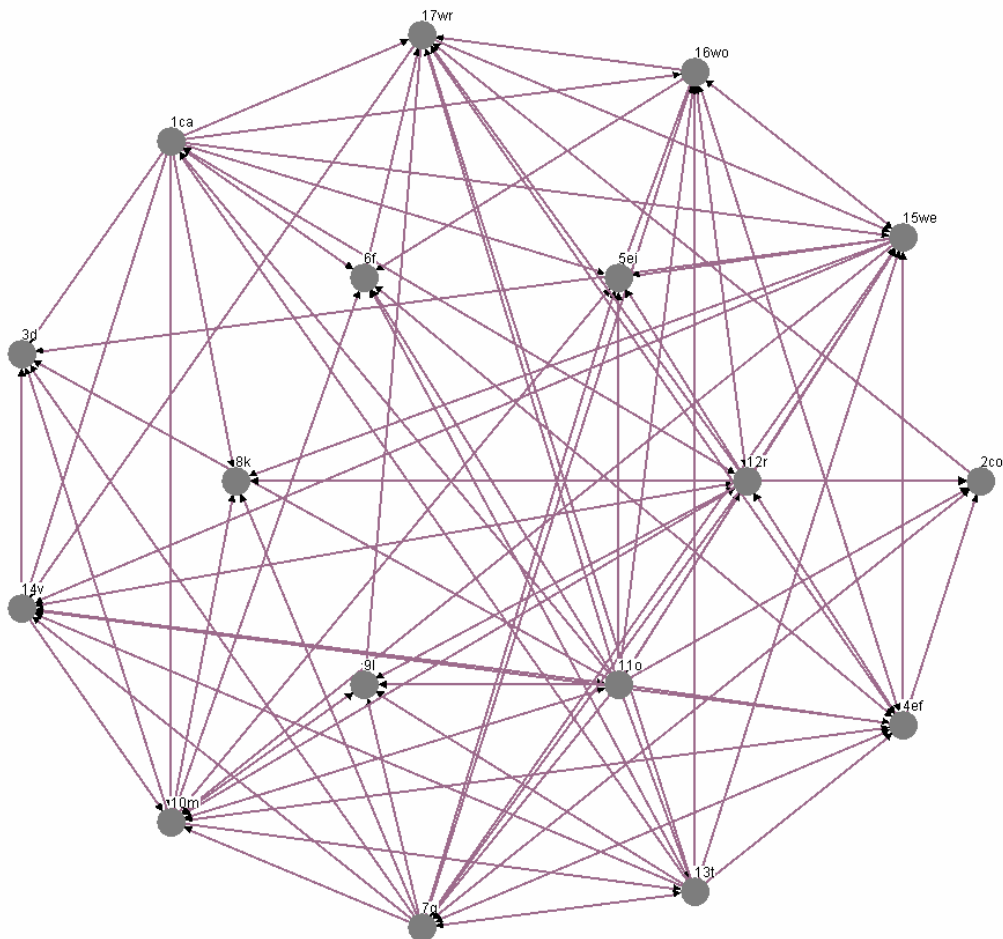
Some bloggers collect a large number of links, even as much as hundreds while some pick only a few links to sites they (presumably) find interesting and read regularly. From the viewpoint of social navigation, both of these strategies have benefits. The first one provides a more comprehensive sample of links, which leads to increased possibilities for networking and traffic. The second one provides a smaller, but potentially more relevant selection of links which allows the visitor to get a more concise picture of the blogs the blogger feels are worth visiting.

Table 4: Linking strategies in Blogtalk blogrolls

Communities	Either some or all of the other members of the community/blogging service are linked to.
Interest	A blogger picks out links that have something to do with a certain theme or a field of interest- for example a network of educational blogs
Language or nationality	A blogger collects links to blogs from a certain area, culture or language.
Link trading	Bloggers link to each other mutually, either out of courtesy or friendship.

4.2.2 Entry links

While the blogroll links represent a more permanent kind of connection that bloggers have with each other, entry links are more interesting from the viewpoint of discussion. Figure 9 shows a network that is established from the links in the entries.

**Figure 9: Network of entry links**

Every blog in the network is the recipient of at least some links. The interlinking between the entries is much denser than between the blogrolls, showing that between the individual blogs, the Blogtalk network was much more established through the links in the entries. The links in the entries are more temporary than the more permanent links in the blogrolls. Despite that, they show that there is interaction between the bloggers.

The level of connectedness in the entry link network is also much denser. It is easier to travel from one blog to another if one uses the links in the entries rather than the blogrolls. Because the links exist in the entries that sink away from the main blog page in time, they would have to be posted over and over again in order to establish a more permanent connection. For that, the blogroll would offer a better solution.

It is also hard to detect cliques or any kind of other linking patterns in this network, as the bloggers seem to link to each other more evenly. 64 % of the entry links are reciprocal (compared to the 30 % of the blogroll links) also suggesting a more even practice of linking.

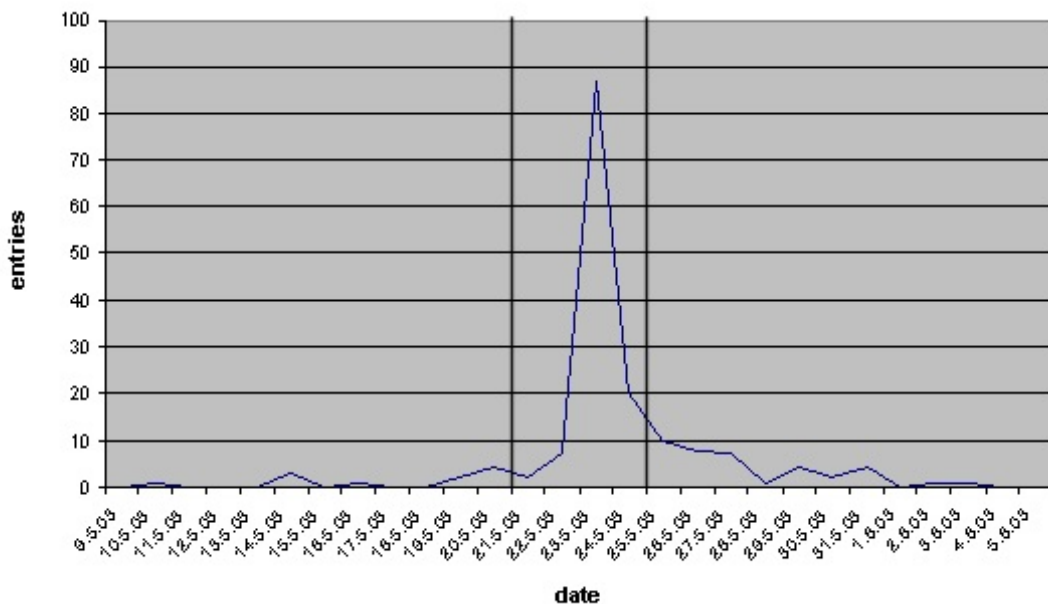
4.3 Entries

165 entries in all were made in the individual during the four week period. Most of those were made on the days of the conference and the days immediately before and after it. The entries made during the conference consist mostly of live blogging and talkback. Around fourth (24 %) of the bloggers in the network didn't take part in discussing the conference in their weblogs (Table 5). Of those who did, the number of entries per blogger varies between 3 and 30.

Table 5: number of entries on Blogtalk per blogger

	entries on Blogtalk	blogger s	percentag e
	0	4	24 %
	1-10	8	47 %
	11-20	2	12 %
	21-30	3	18 %
<i>total</i>		17	100 %
mean	median 6		range 0-30
	9,7		

The days around the conference time are clearly the most active (Figure 10), with the biggest peak on the days of the conference itself (May 23-24). 124 of the 165 entries were made during this time. 87 entries were made on the first day of the conference and 20 on the second. Additionally, this is the only time when the number of posts per day rises over ten. Before the conference and after it the number of entries was significantly lower and the frequency much more sporadic.

**Figure 10: Trends in posting frequency**

Most people blogging on the day of the conference made at least two or three entries referencing most of the presentations at least superficially. Around half of the people blogging from the conference, however, made as much as eight to fifteen entries, in many cases devoting an individual entry to several presentations and writing analyses about them. After the conference, the

discussion simmered down somewhat. Most participants posted their thoughts and reflections on the conference. Links to photos taken during the conference also circulated throughout the blogs.

4.4 Comments

Only two of the bloggers in the analysis did not have a comment function allowed in their blogs. Table 6 shows the number of comments made by each blogger in the other blogs in the network during the phase of four weeks. Comments made in one's own blog (as responses to the comments of others) are excluded.

Table 6: comments made by blogger in other blogs

	comments	bloggers	percentage
	0	12	71 %
	1-3	2	12 %
	4-6	2	12 %
	7-	1	16 %
<i>total</i>		17	100 %
everyone	mean 1,29	median 0	range 0-7
those who wrote comments	mean 4,4	median 5	range 1-7

Out of the 17 bloggers in the network, only five have posted comments in the weblogs of others. On average, each of them made 4,4 comments during the period. Linking to others' entries seems to be much more common than posting comments, which suggests that bloggers generally don't post comments on each other's blogs but rather do the commenting in their own blogs. The comments that were made in one's own blog as a response to someone's comment are excluded. Also to be noted is that the likelihood of receiving a comment was somewhat higher if the commenting blogger was mentioned in the entry.

Table 7 shows similar statistics about the received comments on the Blogtalk entries according to each blog. It should be noted that out of the 17 bloggers included here, three did not write any entries and one other does not have the comments function allowed. Thus, they could not have received any comments relevant to this analysis.

Table 7: number of comments received by blogger (excluding own)

comments	from Blogtalk bloggers		from anyone	
	blogs	percentage	blogs	percentage

0	11	65 %	6	35 %
1-3	3	18 %	3	18 %
4-6	2	12 %	2	12 %
7-9	1	16 %	1	6 %
10-12	0	-	2	12 %
12-	0	-	2	12 %
<i>total</i>	<i>17</i>	<i>100 %</i>	<i>17</i>	<i>100 %</i>
everyone	mean 1,29	range 0-7	mean 5,11	range 0-28
those with comments allowed	mean 1,45	range 0-7	mean 5,8	range 0-28

The distribution of received comments inside the Blogtalk network is similar to the distribution of posted comments among the bloggers. Almost two third of the Blogtalk blogs did not receive comments from the other Blogtalk bloggers. Out of the five Blogtalk bloggers who have posted comments in other Blogtalk blogs, three have also received comments from other bloggers. The numbers are a bit too small to make definitive conclusions, but they suggest that commenting is at least somewhat reciprocal. Another observation that supports it is that the blogger who made the most comments in other Blogtalk bloggers' blogs (n=7), also received the most comments from other Blogtalk bloggers (n=7).

All of the received comments in the Blogtalk entries are counted for the statistics on the the right hand side of Table 7.

Out of the six bloggers who did not receive any comments, three hadn't written any Blogtalk entries and one had disabled the comment function. Thus, almost everyone who wrote Blogtalk entries received at least some comments in them. The 165 entries received a total of 87 comments. Out of the entries that received comments, each one usually got 1-3 of them, though there are a few ones that have received more attention.

4.5 CHIplace discussions

Because of the nature of the board, it's hard to narrow down the analysis of the discussions on the CHIplace board to a specific timeframe. All in all, the board doesn't contain an overwhelming number of topics. The discussion boards on CHIplace are not particularly active. For example the General Discussion board contains 15 threads, which consist mostly of people giving tips to visitors about things such as restaurants and lodging. The only active discussion thread is the controversial topic of whether or not the political affairs such as the

participation of the host country, USA, in a war should affect the conference and people's participation in any way¹. It is debatable whether or not this thread actually has much to do with the subject of the conference itself, human-computer interaction.

The other boards are similar. There are lots of topics but few of them contain a lot of responses apart from the initial post. Individual topics, such as the one for the people whose proposals have been rejected, provoke some discussions that are more active.

This could perhaps be attributed to both the visitors' motivations for coming to the board and the subjects themselves. The motivation of the visitors is probably not social. They come to get information and reference, not necessarily to discuss the subjects. In the same vein the subjects are largely informational and don't invite discussion. The more controversial subjects and those which follow the question-answer format seem to be likely to attract a lot more traffic and responses than others. Only certain topics (as shown previously) spark a more widely ranging discussion. Most of the comments consist of several paragraphs of text, while in blogs the comments are usually more brief.

The timeframe in which most of the messages have been made is also rather wide. The conference itself was held in April 2003 but on some boards, most of the initial messages date as far back as November or December 2002. There is only a handful of messages that have been made *after* the conference. Most of these have been done by different authors or different topics. Compared to the discussion on the Blogtalk network, which was active in the immediate aftermath of the conference but died down somewhat afterwards, the post-conference discussion after the conference is almost non-existent in CHIplace. Most of the notification emails that were mentioned in a previous section were sent between January and April 2003, which also appears to be a comparably active time in the CHIplace forum. According to a study conducted about the usage of CHIplace by Girgersohn and Lee (2002), the emails were successful in fulfilling their purpose of getting the registered users to take active part in the community and renewing their interest in it.

¹(http://www.chiplace.org/content/HCI_conferences/CHI/CHI_2003/_view-thread.jsp?forum=55&thread=485) referenced on 26.8.2003

4.6 Live blogging

On the Blogtalk website, two students have blogged live from the conference – one in English, the other in German. These two blogs do not mirror each other in content; although some things blogged about are the same, both of the writers have their own point of view and opinions, in addition to using a different language. The “language barrier” and the fact that the entries in the two blogs are made largely concurrently might partially explain that there is not much interplay between the two bloggers. Besides the two students, many of the other participants blogged live from the conference, even during the presentations.

Although the possibility to leave comments exists, there is not much dialogue present in the blogs of the two students on the Blogtalk website. This finding is consistent with the study by Herring et al. (2003). The two blogs are also temporary and topical, and have not been updated since the end of the conference. Because of the temporary nature of the blogs, there has not been a lot of time or space for established readership to form. Moreover, because they have been discontinued, there is not renewed interest in their content, something that is usually regarded as essential to the success of a blog.

The lack of dialogue on the Blogtalk website is not necessarily caused by of a lack of interest in the event. In fact, since many of the participants of the conference themselves are bloggers or people interested in blogging, having the discussion and commenting in their own weblogs is more natural for them.

An argument for live blogging is that it offers the audience a sense of “being there” with the blogger, thus giving them an important sense of presence and context of the event that is being blogged about. As the blog entries are made almost synchronously, it’s the closest thing to a live broadcast from the event. A reader has the choice to read several viewpoints or just one. In live blogging the blogger will write her thoughts immediately and relate the events as she experiences them.

The subject of people live blogging in the conference also came up in an entry by one of the participants in the Blogtalk conference (Milonas, 2003). The author posts her thoughts on the subject and asks the question whether or not it is courteous towards the speakers, or even necessary at all, from the point of view of the conference. From a presenter’s point of view, the blogger feels that being

blogged about by several people, including strangers, is a little rough. 10m describes it as “A particular kind of stress when you are not really afraid of what you say or who you are but much more of what they are going to write about you.”

In essence, although live blogging serves the audience by giving a fresh and almost direct viewpoint of the events, it can be distracting to the people who are present in the face-to-face situations.

4.7 Blogging discussions and message board discussions

This chapter features an example of a blogging discussion and a comparison of the structure of a blog discussion and a message board discussion. The entry by Milonas that was the starting point of the discussion on live blogging is a good example of a typical starting point of a blogging discussion, and illustrates some of the differences between the discourse of blogs and message boards. Figure 11 shows a diagram of the flow and structure of the discussion. The entries by people not in the Blogtalk conference are labeled by their names, unless not quoted in this thesis.

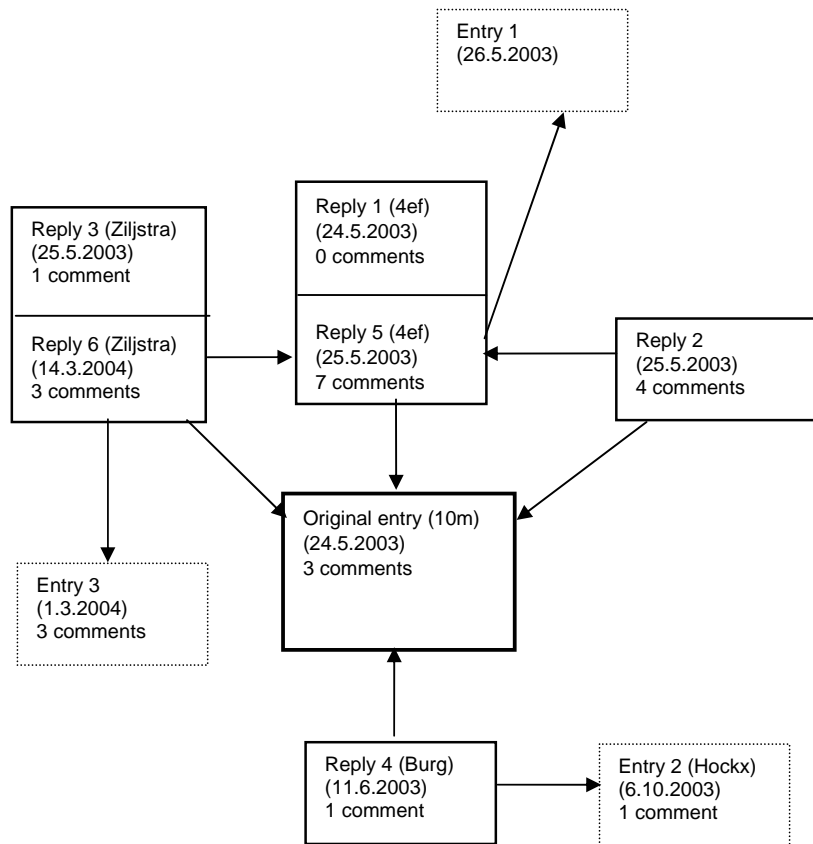


Figure 11: Blogging discussion

The flow of the discussion isn't very linear. Instead of commenting on the original entry, all of these bloggers have chosen to publish their thoughts on the entry itself or the subject in general in their own blogs (two of the comments in 10m's entry have nothing to do with the subject). The opinions are divided, with both disagreeing and agreeing thoughts being voiced. 4ef (Lilia Efimova) is one who agrees with the entry made by 10m, though she had posted her original entry on the subject concurrently and only later edited it to reference Milonas. 4ef has also written two other entries at a later date in which she discusses the subject of live blogging. Thus the discussion has branched off from its roots, if we consider 10m's entry to be the starting point.

Efimova, who also commented on Milonas's original post also discusses conference blogging with regards to *reporting* vs. *reflecting*, or the difference between doing a summary of a presentation with a bit of impressions or a deeper analysis on what was said (Efimova, 2003). This is an example of taking

someone's blog entry and then adding one's own thoughts and posting the results in another blog instead of making a comment in the original entry.

Some of the bloggers also refer to other entries that are not related to the starting point of the discussion. The author of reply 4, Thomas N. Burg, references entry 2 written by Niek Hockx. Hockx criticised live blogging and questioned its necessity, though he did so independently from Milonas, or at least without quoting or linking to her entry. Both Efimova and Zijlstra have made two entries about the discussion (figure 11). Rather than editing entries, bloggers typically post a new one if they have any additional thoughts on the subject. Bloggers often reference their older entries as well.

To further illustrate how linking to other entries and quoting them works in blog discussions, Figure 12 contains a closer look at reply 6, made by Ton Zijlstra.

Blogging during Conferences

[Kaye Tramell writes](#) *"I'm going to try my best, but the SXSW Interactive program actually suggests that attendees STOP blogging & start interacting"*.

Apparently SXSW organizers feel much the [way Marysia Milonas felt](#) during last years BlogTalk. (Also see [Lilia's reflections on this](#))

It also echoes something [Sebastian Fiedler](#) said the other day in a phone conversation with [Lilia Efimova](#) and myself. We talked about whether or not to provide connectivity during the [BlogWalk](#) meeting. We decided not to, as to strengthen peoples connection to what goes on in the room face to face, and let people blog afterwards. Sebastian then said *"We don't want them to report, we want them to reflect"*.

So I guess this is the new question we have to ask ourselves when going to a meeting. Am I here to report? Or am I here to participate, and reflect on it later.

[Permalink](#) | [TrackBack](#) | [Waypath](#)

(posted by Ton Zijlstra at March 14, 2004 03:43 PM)

Figure 12: Example of a blog entry

The entry contains three types of linking- a major link that the contains the topic, or the "catch" of the entry, two additional links to entries giving context to the topic. In the first paragraph, the author links to an entry in someone else's blog, while also giving a short quote that summarizes the content of the cited entry. After that, the blogger gives further context to the topic by linking links to the original post by Milonas as well as the one made by Efimova on the same subject (reply 5). Finally, the blogger recalls an offline conversation with two other bloggers and links to their blogs. The links in the third paragraph are not links to specific entries, but to the blogs in general.

Burg juxtaposes both Efimova's and Milonas's entries in his own weblog and offers his own thoughts on the subject. This kind of writing is typical for weblogs in general. The discussion in weblogs is rarely linear, branching into several directions from several roots instead. This is different from a discussion forum where the discussion is usually in one place (each discussion under its respective topic).

On a discussion forum, the entries are usually separated topically under boards and topic threads. Figure 13 is an example of a thread in the CHIplace forum¹. It follows a typical pattern of how a discussion thread is organised. The original entry states an opinion or asks a question (in this case, the question was about the importance of journals in HCI publishing). The replies flow chronologically as the participants contribute to the discussion- either agreeing, disagreeing or raising new points. In this case, the authors of replies 6 or 7 have also explicitly cited the author of reply 3, although the conversation flows quite smoothly and chronologically from one reply to another.

¹ (<http://www.chiplace.org/index.php?name=PNphpBB2&file=viewtopic&t=241>) 6.9.2004

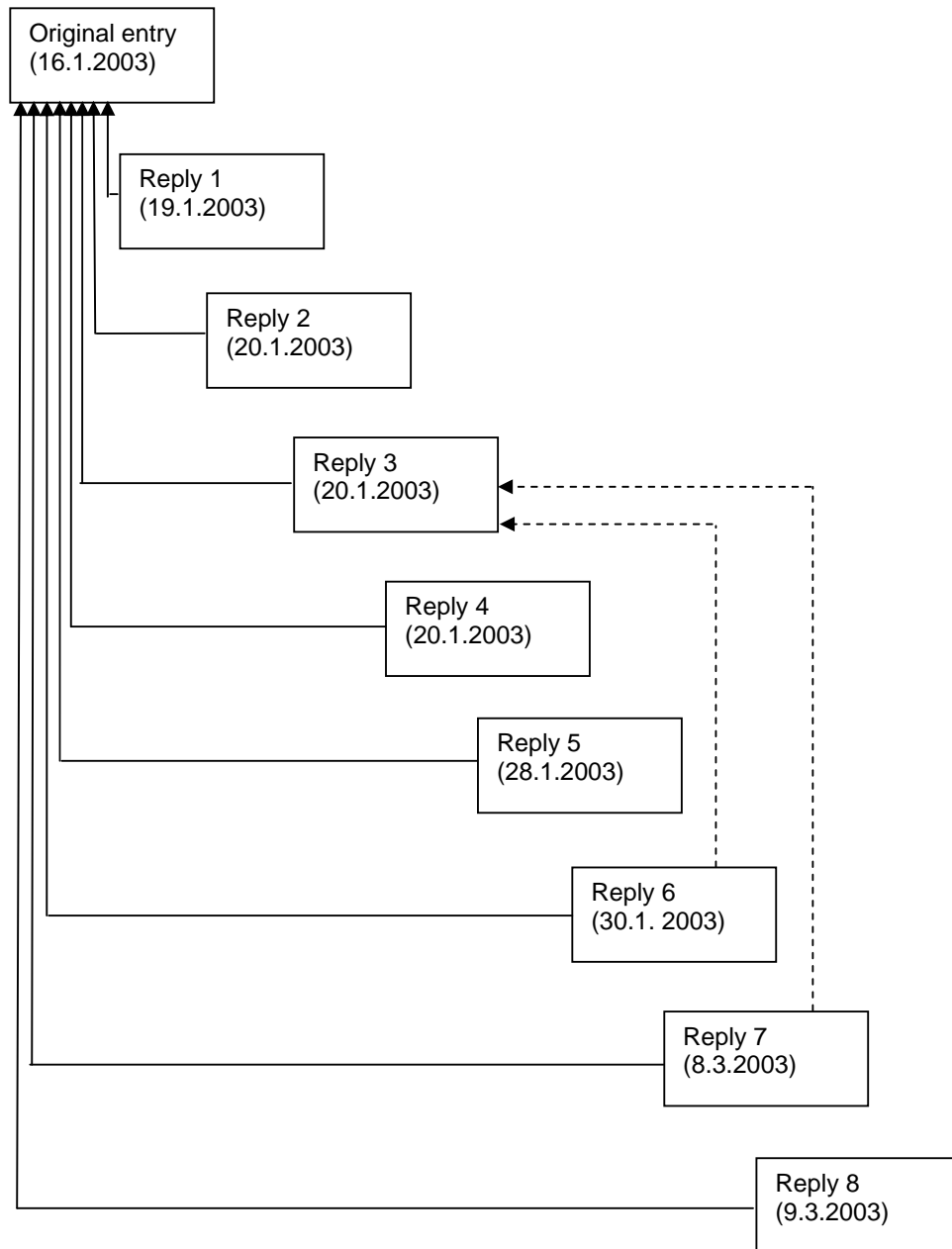


Figure 13: Message board discussion

Compared to blog discussions, the discussion on a forum is usually more linear. Message boards function on a more “question and answer” basis than blogs. Blog entries generally don’t invite discussions as much as topics posted

on a discussion board- they usually have more to do with the blogger's thoughts and viewpoints than the intention to start a discussion.

Figure 14 is an example of a reply to a message board discussion. There are some notable differences between it and a blog entry (Figure 12). The blog entry contains many more links to outside places and it relies more on the links to provide a point and less on the text itself. Links are also necessary as ways of referencing other blog entries. The author of the message board can reference another reply simply by referring to it by the author's name. In this context, linking to it wouldn't make any sense since both of the replies are located in the same thread.

I would like to see more papers, whether in conferences or journals, reference their code. Too often papers report systems that have various features but the code is unavailable for downloading, i.e. you can't run your own trials using the code. That's a big problem. If you were to stack up the last twenty years conference proceedings in various areas of CS, one would wonder how there could possibly be anything left to talk about? But of course there is.

This is precisely the point made by Gilbert Cockton: (which I endorse) journals force authors to cut back on the fat in their claims, conferences largely are fat rich in my experience. A few years back one conference reviewer dismissed work we did as a 'big deal' even though it involved 250K lines of C including writing a modem simulator and the a lash of radio telemetry handling routines (the work won an international award based on a journal publication incidentally).

In terms of academic promotion, the worth of conference publication seems to vary from place to place. By and large however, I have encountered interview panels that simply struck out all conference proceedings, and only focused on journals. Conferences were classed as 'presentation venues' useful for making contacts but not of the calibre of journals.

Let me end on a different note. Working in a Science faculty has exposed me to the journal output of colleagues in Biology, Physics and Chemistry - and generally within CS we find their output astonishingly high compared to ours. Is there a lesson in this for CS journal production?

Figure 14: Example of a discussion reply¹

The lifecycle of a blog entry generally isn't very long, as it is replaced on the front page of a blog with newer entries that are posted there. Depending on the updating frequency of a blog, only entries from a couple of days or weeks are

¹ (<http://www.chiplace.org/index.php?name=PNphpBB2&file=viewtopic&t=241>) (Harpur, 2004) 10.10.2004

usually displayed on the front page, though the earlier entries can usually be accessed from the archive.

In reality, a blog entry can have longevity. For example trackbacks of Efimova's and Milonas' entries from the above example show that the entries have been referenced over a period of months, getting links to them as late as ten months after the original entries were made. The most active discussion has happened within days following the entries. However, the continuing linking suggests that some entries and blog discussions have a longer life than others, just like message board topics. The permalink functionality allows linking to entries even after they have disappeared from the main blog page, giving them extended longevity (although they can still be lost if the blog changes hosts or is deleted).

5 Results and discussion

The results presented here are based on a case study. Thus, they only give an example of discussion in weblogs. The weblogs in the study have been analysed carefully and based on that, it can be assumed that they represent one example on discussion between participants in a conference. The results present one way how weblogs are used to discuss an event. Another conference or event might generate discussion that is different from one studied here. Besides that, the bloggers in the Blogtalk network did not necessarily represent average webloggers. According to Henning (2003), most bloggers are teenagers or people in their twenties; over 90 % of blogs are created by people under 30 and close to 50 % of all blogs by teenagers. The participants in Blogtalk are mostly researchers, graduate students and other people who do not necessarily fall into that particular age group. Several of them are affiliated with the HCI field and they probably have a certain degree of expertise in the field of computers and the Internet, surpassing the knowledge and skills of an "average" person in many ways. Finally, since they are participating in a blogging conference, they are probably enthusiastic and interested in the subject. This is also reflected in the fact that the bloggers were also more frequent users of features such as comments and trackback than the bloggers in the study by Herring et al. (2004). Their opinions and behaviour can be assumed to reflect these facts in some ways.

However, the results are consistent with previous studies. Because of that, it can be assumed that they could be applied to other kinds of blogging discussions as well, though with caution. The wide variety of different blogging styles, bloggers and blog uses alone (Nardi et al., 2004) probably leads to many different types of discourse. Different methods (such as a more thorough qualitative analysis) might also provide different results. Wrede (2003) suggested that weblogging in itself is continuous, but discussions often are project and result-oriented, with the flow diminishing once the project has been finalised. The trends on Blogtalk posting activity (Figure 10) show that the posting activity was highly centered on the days of the conference itself, while only a limited amount of posts were made after the conference. Comparing the link network in Figure 8 and the entry link network in figure 9 we also see that there was interaction between the bloggers in the form of links. Since linking has previously (Wrede, 2003, Herring et al. 2004) been established as an integral

part of blogging discussions, it can be assumed that the participants in Blogtalk used their blogs in discussion on the event.

When it comes to trying to evaluate the overall success of using blogs for discussion on Blogtalk, one is faced with the problem of choosing the criteria by which to go. As blogs are mainly about personal publishing that can be done in a collaborative social environment, the success is probably best rated by evaluating the need of the bloggers. The needs of the audience or the lurkers are a harder thing to examine, since their participation in the discourse is very limited. The discussion activity analysed in section 4 shows that there was interest in discussing Blogtalk among the bloggers, and the biggest activity in the discussion was around the conference. The analysis on the blogroll links and the entries suggests that several of the bloggers also have ties to each other outside the immediate conference, but the discussion was spread more evenly between all of the blogs that took part in blogging about the conference. Links, comments and trackback were used extensively as means to communicate, organise, and structure the discussion.

The CHIplace discussion board does not appear to be very successful as a channel for discussion when viewed from the surface. The messages are few and far between and there is not a lot of active interaction between registered members, especially after or during the conference. However, posts in other threads show that there is support for the place and at least some of its visitors find it a valuable and interesting resource. The relative inactivity could be caused by many things- possible explanations could include usability, lack of social structure or the lack of time and inclination on the part of the participants. However, CHIplace seems to be able to offer something that seems to be lacking in Blogtalk: a designated place for users to post questions and get answers.

As a way for giving notifications, there doesn't seem to be a big difference between the styles used by Blogtalk and CHIplace, though the latter also uses the optional notification emails as a way to support it. With its emails and hot topics, CHIplace takes a step towards incorporating some blog-like elements into it. One of the most typical uses for a blog is posting interesting links that the blogger has chosen and commented on. CHIplace does this by sending out emails and picking up the most interesting, controversial or otherwise attention-worthy discussion as hot topics and then notifying registered users of them.

Unlike the announcements concerning the CHI conference, the purpose of these topics is rather to provide an incentive for the users to take part in the community as well as to remind them of the purpose of CHIplace- discussion and interaction with other participants. The strategy is similar to that of a blogger who picks out the most interesting web links and then posts them in his/her blog.

Based on the observations made here, the discussion at CHIplace, a website associated with the much bigger ACM CHI conference, is overall much quieter than the discussion in Blogtalk blogs. Although the two are not directly comparable, it is an interesting observation. It supports the assumption that weblogs do provide a meaningful medium for discussion and that there is a general interest in using them for that purpose. Other factors might have contributed to this, of course. Blogtalk is a conference aimed for bloggers that is specialised in weblogs while CHI is a general HCI conference.

5.1 Following blog discussions

One of the biggest problems in using weblogs for discussion seems to be caused by the distributed and relatively unstructured nature of the discourse. This is also brought out in previous studies by Wrede (2003) and Nardi et al. (2004). Because the discourse is spread through several places, it becomes hard to follow. Following the line of thought might be hard if the responses to each question/discussion are not in close proximity with each other. A casual reader of the Blogtalk page might have trouble finding the thoughts of the individual bloggers in their respective blogs. At the very least, she would have to go through the effort of digging through the archives of each individual blog, amidst all the other entries that concern different issues. The discussion forum approach CHIplace takes is more accessible for a user who is not that familiar with the world of weblogs. The discussions on each topic are located in the appropriate area, and the community led by the moderators of the forum makes sure that the postings stay on topic.

Besides hyperlinks, the trackback function plays a major role in helping a reader to connect entries to each other. If bloggers involved in a discussion employ trackback, it is easy to see which other bloggers have referenced their entries. The referencing entries have a link to the sources and sometimes other

blog entries and documents on the subject as well. There is not an entirely reliable way to track everything because not all of the referrers have a trackback function, and not all of them might quote the original entries directly.

The use of these functions and tracking the entries will require some effort and a certain degree of Internet expertise from the reader. On a message board such as CHIplace, the discussions are usually relatively linear. Although different posts might be replies to different users (and not always in a certain order), all of them are in the same place which makes following the direction and the different viewpoints of the discussion easier. The example discussion thread in Chapter 4.7 contained some hyperlinks to offline places, but they were essentially all in the same thread.

On the other hand, what happens when several people essentially blog about the same thing? In the case of Blogtalk, over twenty people blogged live from the conference. From the reader's point of view, each of them can potentially write something interesting and worth noting. Of course, the viewpoints of each blogger are different as well. Many people blogging about the same subject also ensures that the interesting topics are more likely to spread over the network of blogs.

An example of this is the list of live bloggers in the conference. Although it was first posted and later updated by 13w, several others posted the list in their blogs right afterwards. This probably helped to spread the awareness about the different blogs to the readers, especially casual ones.

On the other hand, posting the same thing in several places can cause unnecessary clutter. The likelihood of finding something *really* new and relevant probably decreases with each new entry, especially if the bloggers are mainly referencing each other. This is not always the case, even in a group of 10 bloggers; it is possible that each one of them has something interesting to say on a given subject. Reading through all the entries and filtering them, however, might require patience and skills. At worst, blogging like this may serve no "real" purpose - the result being blogging only for the sake of blogging and nothing else. Although live blogging from the conference can be beneficial for someone who is not able to be there in person, over twenty people doing the same thing might not serve any real purpose. As Milonas (2003) pointed out, it can be distracting from the point of view of the other participants in the conference too.

5.2 Communities – or just writers and their audiences?

Despite the community aspect of the blogosphere, it is in fact possible for anyone to start a blog without interacting with other bloggers whatsoever; in the same way, anyone can put a document online without linking to other documents or being linked back in return. This is a major problem in the theories of defining weblogs through the community aspect. According to a study by Lawrence and Giles (1998), of the estimated billion documents in the Web, only 40 % are covered by any major search engine. There are many solitary “islands” outside the connected networks in WWW. Almost a third of the weblogs in the analysis by Herring et al. (2003) had no other links besides badges and a significant minority (17 out of 203 weblogs) had no links at all. Although it does not say anything about whether or not the bloggers of these blogs interact with other bloggers, there are not any links or navigational cues to support it. Thus, it is reasonable to assume that many bloggers just publish content on the web but do not participate in any blogging communities. By contrast, the large majority of bloggers in Blogtalk used links (4.2).

In a similar vein, it is hard to define if bloggers interacting with each other really form a community or if they “just” interact with other bloggers. According Nardi et al. (2004), blogging in itself does not guarantee a community and that encouraging comments and feedback and reciprocating these gestures is important. Going by Milroy’s (1987) definition, it is questionable whether the bloggers in the Blogtalk network are a community. The Blogtalk conference is the most visible thing through which cohesiveness is achieved throughout the whole network. As discussed in Section 4, the interlinking in the network is quite loose and based on the relationships between individual bloggers. However, it does fulfil the characteristics presented by Preece (2000). The people in the Blogtalk network do interact socially and have a shared interest in the Blogtalk conference. Cohesiveness is also achieved through links and comments as well as bloggers referencing and mentioning each other in their entries.

Nardi et al. (2004) also provided some examples of blogging with regard to communities and discussion. In general, the examples they presented showed that people were satisfied with the publishing part of the blogs but less pleased with the discussion and feedback aspects. The most successful community in

their study was one where the members of the community (in this case, a community of poetry bloggers) self-identified as a community. The members in the community read and commented on each other's blogs on a frequent basis. As with the Blogtalk conference, the communication also led to offline interaction between the participants. Also similarly, to the Blogtalk network, the community contained certain bloggers that were known throughout the community and active in the communication. The informant remarked on the expected reciprocity because of the communication and the role of the blogrolls in "mapping the community". He found the blogs to be a valuable channel in keeping in touch with like-minded people and even a "partial substitute" for email for many.

The study by Nardi et al. (2004) also highlighted a problem that was also suspected to apply to the Blogtalk network based on the analysis. Because the interaction capabilities of blogs are limited (they are asynchronous and rarely offer a way for private messaging), the interaction sometimes left the blogs and moved to other media such as e-mail. The limited interactivity of blogs was also valued, since it helped to avoid flame wars and serious arguments. Moreover, the participants in the conference saw each other face to face in the event. Despite that, the posting frequency (related to Blogtalk) was the highest during the conference.

What about the point of view of the reader? Anyone can usually read a blog and with the emergence of automated, free blogging services, it is quite easy to start one. However, the blogosphere tends to be somewhat isolated. For someone wanting to take an active part that goes beyond being an observer, frequent participation and active communication with other bloggers is required.

5.3 Blogs vs. discussion boards

When it comes to discussion and interacting with other people, a blog and a discussion board can be seen as two different, distinct ways of presenting the discussion content and navigating the information space in which the discussion is carried out. Discussion in blogs has some differences from message boards in both structure and execution. Table 8 contains a summary of them:

Table 8: Differences between discussion forums and blogs

	Discussion forum	Blogs
Discussion flow	Discussion flows linearly, with participants referencing each other within a thread.	Discussion isn't linear, but moving from one blog to another. The participants reference each other in their blogs.
Organisation	Entries are organised under boards and topics	Entries in individual blogs, supported by comments to entries
Ownership	Community	Personal
Moderation	Centrally moderated	Moderated by the author of each blog
Chronology	Depends on forum technology, the initial entry in a topic usually displayed first	Entries are displayed reverse-chronologically,
Referencing	Entries are connected to each other by being arranged under topics and referenced with quotes.	Entries are distributed throughout blogs, connecting and referencing is done with the help of links, quotes and trackback.
Participation	Anyone can usually post topics and replies, though registration to a forum is sometimes required.	In order to post entries, one must have a personal blog or be a part of a collaborative blog. Visitors can post comments to entries without having to register.

A weblog is a personal space to post thoughts and commentary while a discussion forum is a place for people to come together to do the same thing. Although a forum is often administered and moderated, it is a collaborative space whereas a weblog "belongs" to a single author. On the other hand, the author does not necessarily act completely individually, but in relation to other bloggers.

In a discussion forum, each discussion is made under their respective topics, which in turn are posted in the appropriate forum for each of them. In a blog, the blogger makes entries on the main page only. Discussion happens in mainly two ways- entries posted by other bloggers in their own blogs and comments posted by visitors to the blogger's entry.

In weblogs, comments give both other bloggers and readers without blogs an additional way to communicate with the blogger. The results from the analysis of comments show that bloggers generally rather do the commenting on their own blogs instead of posting comments in someone else's blog. Comments are also reciprocal and more likely to be made if the entry mentions the commenter.

Both a weblog and a discussion board combine monologue (the thoughts of individual people) with dialogue (the discussion and commentary between groups of several people). On a message board, the user always has to work

within the confines set by the board, while the moderators and the social situation govern the discussion. Either official rules or an “invisible” code of conduct may limit the ways the user can use a message board.

In a weblog, the emphasis is on the monologue while the dialogue may spread over a network of places, making it fractured. Even if there is an option for leaving comments to a blog entry, the responder can simply write the comments in her own weblog and post a link to the original entry. From another blogger’s point of view, this translates into a freedom from the confines of the system the original entry appeared in. There is no editor or moderator to deal with, and the reader can post her thoughts freely in her own blog, supporting them with links and other information she deems worthy.

Because of the distributed nature of the discourse, blogging relies on links to preserve it. Without them, there would not be connectedness between entries in different blogs which would make the discussion hard to follow or even impossible. Links in blogs also function as a way to build and preserve networks between bloggers.

The distributed nature of the discourse also translates into a freedom from the rules that govern message boards. There is no editor or moderator to deal with, and the blogger can post his thoughts freely, supporting them with links and other information he or she deems worthy. In a sense, the blogosphere moderates itself, as nobody is forced to read a blog. Still, there is often content that causes controversy. The community weblog LJ Drama Files¹ features several examples of flame wars and controversial entries on Livejournal.

In a way, a blog could be compared to an interactive talk radio show where listeners can “call in” with their comments. While everyone is free to have an opinion and express it, the blogger acts as the host and has the most power over the flow of the discussion.

One of the strengths of blogging is that it can provide a medium for alternative, easily overlooked viewpoints (Seipp, 2002). Because bloggers who blog about similar subjects often link to each other, the reader may find it easier to get information about and understand opposing points of view. It gives more responsibility for the reader- finding relevant information throughout a sea of

¹ LJ Drama Files (<http://beta.ljdrama.org/weblog.php>) 28.8.2004

blogs can be a daunting task. The pieces of information are also not distributed evenly throughout the weblogs they appear in. As illustrated by the example of the Blogtalk discussion in Chapter 4.7, blogging discussion usually consists of an initial entry containing the “idea”, or starting point of the discussion with several people linking to that entry, sometimes adding additional pieces or opinions. Only if one of them happens to write something that proves to be as relevant as the original entry, prompting people to start linking to it, the discussion moves forward. The effect of several bloggers blogging about the same thing can also be an advantage. Since the relationships in the blogging community are mainly supported to hyperlinks, the increased number of them helps to bring awareness to the entries they might not get otherwise.

While the entries of a blog are often archived and can be found and read after they are no longer visible on the main page, the emphasis of the discussion is mostly on the latest few entries that are displayed there. On a discussion board, the average age of discussion in a thread is potentially longer, as the most interesting or popular threads can stay active days or weeks after they have been started. In a blog, the casual reader is probably most likely to read the front page and respond to the entries there.

In the archives of a blog, the old entries are usually only arranged according to the date they were originally made. Because of lack of subject categories, it is hard to find posts having to do with a specific topic. Some blogs do have a search option that allows the user to search for posts containing a certain keyword. Still, there are usually no areas for different subjects in a blog-everything is posted together. A visitor on the CHIplace board, for example, can find the discussions pertaining to HCI theory on the appropriate board without having to wade through all of the threads in the forum. A blog reader might be forced to sift through several entries on different topics to find what he is looking for. However, the use of tools such as links and trackback make it much easier, if they are available.

5.4 Further developments

Both Blogtalk and CHIplace have gone through some changes after the time this analysis was made. The second Blogtalk conference was held in 2004, and there were minor changes in its execution. There is no longer a blogroll on the main page, but a wiki has been utilised to allow the participants to post

information about themselves, such as links to their blogs. There is also a message board, which has barely any activity.

CHIplace went through an overhaul in October 2003. The old interface was improved and now the main page of the site utilises a weblog as well. The discussion forum has been launched with a new interface and navigation, though the old messages are still available in archives. Most of the functionality and content is the same as before, but the descriptions in this paper mostly refer to the old CHIplace.

It is hard to say if the new interface and look have an effect on the usage of the board. The new interface does correct many of the problems present in the old one, such as navigational inconsistencies and other minor confusing details. The main page of the site that contains notifications is set up as a blog. This may also suggest that the use of the blog format for that purpose is becoming more and more common, perhaps even a kind of a standard in setting up web pages.

5.5 Conclusions

In this thesis, weblogs have been analysed from the viewpoints of discussion and communication. Discussion is distributed throughout blogs that belong to individual bloggers as opposed to a shared space such as a discussion forum. Individual bloggers post entries in their own blogs, but connect them to other bloggers with the use of links. Bloggers also use two kinds of links: links in blogrolls to link more permanently to other bloggers and links in entries to link and reference the entries other bloggers have posted. Linking (between blogs and especially between entries) is essential for preserving and structuring discussion. Links are used both to build and maintain relationships, communities and networks and to support discussions by providing a means to reference other entries. Comments and trackback also help to facilitate discussion and networking in the blogosphere.

In order to apply weblogs for discussion successfully, one should focus on their strengths, not on their flaws. A discussion forum provides an environment for users to share ideas, ask questions, get answers, collaborate and debate on various topics. Blogging works best as a collaborative tool for publishing and discussion when that collaboration stems from the point of view and needs of the bloggers. Searching for information is achieved better through search

engines, and the question-and-answer environment of discussion boards is more fruitful for that kind of interaction.

However, a weblog provides a free environment for the blogger to practise discourse that enables both interpersonal and intrapersonal discussion, build ones identity on the web and collaborate with other bloggers. The findings from the case study show that blogging can serve as a viable tool for discussion. Live blogging, for example, can be used for tracking and recording information and providing outsiders with aa viewpoint of a blogger that is present in an event.

For the audience, the distributed nature of the information and the role as an outsider provide some challenges that must be overcome. Further research is needed in order to find out about these challenges more thoroughly so that weblogging systems can be built to serve not only the bloggers, but also their readers.

With regard to discussion and communities, blogging software could be enhanced to include more features to support these uses. An opportunity to build and navigate maps of discussion, for example, could provide means to overcome challenges presented by the distributed nature of blogging discourse. Perhaps with the help of trackback, RSS feeds or both, users could have the opportunity to subscribe to entries, and receive information on other bloggers linking to those entries. Graphical representations of these blogging discussions could help users in following and structuring them more easily. The problem of finding information in blogs could be helped with a blog search engine or the opportunity to narrow a search on an engine such as Google to include only blogs. Wikis (web pages with collaborative editing rights) could provide an opportunity for users to share knowledge and to eliminate the “clutter” caused by bloggers posting the same thing in several different places. They would also provide a shared, collaboratively moderated environment as opposed to discussion forums.

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