

# Internet evolved – from secondary to primary Competitive Intelligence data

Dominika Dabrowska

## **Abstract**

Primary data is an important source of information for Competitive Intelligence. Traditionally, it has been collected from interviews with stakeholders, talks at conferences and other means of direct interpersonal communication. The role of the Internet in the data collection – if it was used at all – was that of a provider of supplementary secondary data. Here, this approach is challenged and, using three examples of Social Media, it is shown that the Internet can and does provide valuable primary information to the Competitive Intelligence professional. Accordingly, a case is made for a shift of focus in the data collection process.

## **1. Introduction**

According to “The Strategic and Competitive Intelligence Professionals” (SCIP), formerly known as the “Society of Competitive Intelligence Professionals”, Competitive Intelligence (CI) is “the legal and ethical collection and analysis of information regarding the capabilities, vulnerabilities, and intentions of business competitors” (SCIP web page 2008). When observing both the use of CI within companies and the publications written thereon, it becomes clear that CI is still a very young management discipline which offers many opportunities for both practical and theoretical research. Especially the use of the Internet in CI is still somewhat controversial. Traditionally, the Internet was seen as a source of secondary data and was used in CI to supplement offline primary data collection. However the Internet’s rapid evolution over the last years and in particular the emergence of Social Media (SM) and User Generated Content (UGC) warrants a re-evaluation of this traditional view. In this work, three of the most popular representatives of Social Media – forums, blogs and microblogs – are examined for their potential to provide relevant primary data to CI analysts and to thus change the traditional approach to data collection in CI.

## **2. Definition and importance of primary data sources**

The exciting thing about information is that it creates change. The modern organisation experiences this phenomenon on a continuous basis since a single piece of information has the power to force an often huge entity into a series of radical and generally involuntary transformations (Roukis et al. 1990). McGonagle and Vella (1996) hold that this is a direct result of the explosion of raw information now available to organisations from different, partially novel sources.

It is important to be able to classify this data in order to support the process of information gathering and analysis. This classification is subject to ongoing debate. According to Aguilar (1967) sources of information should be classified on the basis of the locus (internal or external to the organization) and type (personal or impersonal) of the source. The majority of scientists and professionals from the field of CI however use a different categorisation - they differentiate between sources of primary data (“primary data sources”) and of secondary data (“secondary data sources”). Wilkins (2007) holds that primary data sources come straight from the source, for instance from competitors or insiders. Secondary data is accordingly data which has passed through at least one person who cannot be considered a primary data source.

According to Imperato (1996) primary information is more accurate and unique than secondary information. From Johnson’s (1999) point of view primary sources mostly cover events which will take place, therefore allowing the receiver to be more active, whereas secondary sources usually contain information on events from the past. In Table 1 some examples of primary and secondary data sources are listed.

<b>Sources of primary data</b>	<b>Sources of secondary data</b>
Personal observations Speeches Live interviews and presentations Industry experts Competitors Customers Suppliers Alliance partners Government officials	Newspapers and magazines Trade and industry journals Industry newsletters Annual and financial reports Analysts' and consultants' reports Industry directories Distributor and supplier listings Trade and industry associations Internet - competitor and other websites Commercial and electronic databases Off-the-shelf reports Benchmark and re-engineering studies Television and radio programs Government documents Technical and patent reports Internet - competitor and other websites Job postings Internet chat rooms Trade shows

Table 1: Sources of primary and secondary data in CI according to Kahaner (1996, p. 55), Miller (2000, p. 15), Fleisher and Blenkhorn (2000, p. 15).

Notwithstanding the advantages of primary data sources, their adaptation in CI has been somewhat sluggish. Porter already noticed in 1980 that researchers tend to spend too much time looking for published sources and using the library before they begin to tap into field sources. The researcher should not exhaust all published sources before getting into the field (Porter 1980, p. 371). Other scientists have spoken out in support of this point of view, such as Tyson, who wrote that '(...) it has become apparent that many strategic planning groups within companies still develop their strategic plans for the future based on secondary information, assumptions and guesstimates.' (Tyson 1998, p. 6). Such reliance on secondary information seems unnecessary, since, according to Kahaner (1996) and Potter (2001) up to 80% of intelligence can be acquired from primary sources.

One of the most important advantages of using primary data sources lies in their knowledge and spreading of weak signals (Coffman 1997). Vendors have to be able to quickly catch signals about weaknesses, threats, changes or plans that are being sent by the competitive environment (Gilad 2004, p. 5). Given the widespread availability of

primary data, there seems to be no excuse for competitive surprises (Fuld 1995, p. 417). Today, the majority of scientists agree on the increased importance of primary data sources (Culnan 1983, Jain 1984, Keegan 1974, Kefalas and Schoderbeck 1973). Jaworski et al. (2002) argue that an analyst “makes a gradual transition from exclusive reliance on impersonal external sources (i.e. annual reports, market analysis reports) to personal sources both inside and outside the company” (Jaworski et al. 2002, p. 284). Comparing the volume, costs and value of primary and secondary data sources one can clearly see that although it is much easier to collect data from secondary sources the true value of CI lies in primary data (Michaeli 2006). Another reason why CI data collection should rely so strongly on human sources of information is the fact that only a small fraction of the relevant information will ever be published (Michaeli 2006).

Furthermore, in some countries the number of trustworthy secondary sources is seriously reduced due to censorship - for example, in Latin America primary data sources are, out of necessity, the main providers of information (Alvarez 2007). As was shown in a study by Price Waterhouse Coopers, the use of primary data sources is also gaining traction with professionals (Collins 2002). In 2002, PwC interviewed CEOs of 405 product and service ‘trendsetter’ companies identified in the media as the fastest growing U.S. businesses over the last five years. Those CEOs were asked about their sources of information for CI. The report showed that those companies rely on:

- Own field sales force (82%)
- Searches of published sources (76%)
- Trade associations and members (75%)
- Former employees of competitors (51%)
- Industry analysts (49%)
- Market research with customers of competitors (49%)
- Public officials (11%)

As these values show, some of the most valuable information can be collected in direct conversation with another person. CI information which has other people as a direct source is often called HUMINT (Human Intelligence). This kind of information has a lot of potential (Michaeli 2006). It is the major source of information from which CI analysts can assess the motives, intentions, thoughts and plans of the competitors. There are however always ethical and quality issues connected to the extraction of HUMINT. It has to be legal in order to be officially used for CI. Therefore bribes, blackmail and other illegal methods cannot be used - though usually that is not necessary to obtain the wanted information. Scientists often underestimate the willingness of stakeholders to talk. Since, as the Edelman Trust Barometer (Edelman Public Relations 2008) shows, people are much more willing to trust peers perceived as equal than corporations, elicitation methods and personal interviewing are usually sufficient (Michaeli 2006, Ayyub 2001). According to Tyson (1998) 95% of all necessary intelligence is available just by asking people. Elicitation can be understood as “the process of acquiring information from other individuals, which avoids direct questions

and employs a conversational style to help reduce concerns and suspicions, in the interest of maximizing the flow of information” (Nolan 1999, p. 5). The purpose of elicitation is to gain non-confidential but non-published information through personal contact. As such, the elicitation methods applied must be chosen according to the interviewee’s character, mental state and personal relation to the interviewer. HUMINT is usually gained during exhibitions, trade shows, conferences or visits at other company’s headquarters. Information gained in this manner consists mainly of personal opinions, views and assumptions, therefore its validity and reliability needs to be verified. One factor can be the frequency with which a certain piece of information surfaces in conversations - if it is mentioned only by one source, the reliability may be lower than if it is independently verified by many sources. All this - nurturing a relatively stable network of personal information sources and properly analysing the data - leads to a high investment in both time and effort, which should always be taken into account (Jaworski et al. 2002, Britt 2006).

### **3. Definition of SM**

The driving force behind the Internet remains the increasing wish of people to evolve beyond mere passive consumption of content as it was the case using classical online sources. They want to be able to produce and share information with more and more peers regardless of physical connection. Such prosumers, as they are called since they combine the properties of both producers and consumers in one person, were the driving force behind the evolution of the Internet’s technical infrastructure to a point at which online collaboration and content creation became accessible to the masses. This in turn led to the development of Web 2.0 and the SM phenomenon.

Although the term Web 2.0 was first used in 1999 (DiNucci 1999), it was not until 2005 that it gained traction with the general public. At that time though scientists and managers remained sceptical. They criticized the lack of a strict definition of what Web 2.0 is and compared it to the Internet bubble which burst in early 2000 (Lietsala and Sirkkunen 2008). Tim Berners-Lee, one of the fathers of the Internet, stated that the Internet was intended to be place of communication, collaboration and interaction between people from the beginning on. As such, from his point of view, the concept of Web 2.0 was redundant (Laningham 2006). Despite the criticism, the term kept gaining on popularity: In June 2009, the BBC reported that the Global Language Monitor had declared the term “Web 2.0” a new English word after finding that it was used more than 25000 times on the Internet (BBC 2009). Although this information underlines the popularity of the term, traditional lexicographers question this decision and the methodology behind it. Nowadays the term Web 2.0 is commonly understood to describe information sharing and collaboration on the World Wide Web. As such it is the infrastructural and philosophical base for SM and UGC.

There is no official definition of SM or UGC, but for this thesis the definition of Andreas Kaplan and Michael Haenlein is used as it concisely describes the essence of these phenomena and, judging by how often it is cited, seems to reflect the view of many researchers. Kaplan and Haenlein (2010) define SM as ‘a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content’ (Kaplan and Haenlein 2010, p. 61). Thus, Web 2.0 is the ideology, SM are applications implementing it, and UGC is a product which is created by using the applications while following the ideology.

Three characteristics which content needs to have if it does indeed follow the ideology of Web 2.0 have been outlined in a study of the OECD in 2007: The first requirement is that access to the information should be public. The second one is that content should not be a simple duplication of a press release but should be somehow new and innovative, and the third one is that it should not have been created for commercial reasons (Wunsch-Vincent and Vickery 2007). This very broad definition encompasses such a wide range of different types of UGC that it is impossible for a single software to optimally support the creators of all UGC. Consequently, many different types of SM have evolved.

A study by Strategy Analytics (Strategy Analytics 2007) suggests that the 373 Million SM users of 2007 will have swollen to over 1 billion, or roughly 15% of the world population, by 2012. Such a number of people describing their experiences in a generally accessible way has, among other things, serious commercial implications: studies show that UGC has a great impact on purchase decisions (Dellarocas 2006) since the potential buyers trust the opinion of other people. Nearly 96% of all Internet users search for online information before making a purchase. The Internet gives CI researchers and practitioners the opportunity to locate the statements of experts and opinion leaders (Graef 1997, Shinsuke et al. 2005). The Gartner Group predicted that web communities would influence one third of all consumer purchases online and offline by 2011 (Conlon 2009). The role of the dialogue between customers and companies on UGC platforms is also stressed by nearly all scholars and consultants (Fank 2009). In a study conducted by professor Fank 342 bloggers and forum owners were interviewed. They stated that, on average, 22% of the discussions on their platforms were about products and their features (mostly hard facts) and 19% of the discussions were about service, image, happenings and attitudes towards companies (soft facts) (Fank 2009). In roughly 60% of the blogs and forums both hard and soft facts were discussed in equal parts. These discussions have a great impact on the purchasing decisions. Therefore online monitoring has evolved from an additional nice to do activity to a fundamental corporate responsibility.

## **4. Assessment of some examples of SM from the primary data point of view**

The number of Internet users increases each day. Simultaneously the way people communicate and companies gather CI changes (Charles 2007). Studies show that the Internet is widely used by CI practitioners (American Productivity and Quality Centre 2000, Global Intelligence Alliance 2005, Zhao and Jin 2009). In one such study from 2003 72% of 106 interviewees said that the Internet is their main source of secondary CI information (Altensen 2003). In those discussions, the Internet is discussed in general and presented as a medium which helps while doing primary research (Stanton et al. 1994) through providing secondary data (Erdelez and Ware 2001, Charles 2007, Rothwell 2008). Even though articles recognising the relevance of UGC as a source of CI information are starting to appear (Teo and Choo 2001, Kassler 1997, digimind redbook 2009, Deng and Luo 2007), these publications tend to be very general, lacking any in-depth analysis or practical suggestions (Cottrill 1998, Attaway 1998).

Bearing this in mind and taking into account the remarks of CI scientists who say that approximately 90-95 percent of relevant CI may be gained from publicly available sources of information (Barndt 1994, Kahaner 1997, McGonagle and Vella 2002b) an interesting question is whether there are also relevant voices from stakeholders such as partners, suppliers, employees, unions, customers, shareholders, investors, education and research institutions media, public, government, recruiters, reviewers, competitors, trade associations, financial institutions, political groups and special interest groups or communities which can be found on the Internet. The aim of this section is to give a critical and in-depth assessment of whether SM does offer the “wide spectrum of human information sources” needed for a comprehensive CI analysis (Gilad 1989), and whether specific SM can provide a relevant source of primary data for CI.

### **4.1. Blog**

#### **4.1.1. Definition and importance**

A web log, usually simply called a blog, is “a type of Web site used by individuals, groups or business entities to publish opinions and commentary on various topics” (Walker 2009). According to Marlow (2006, p.3) “Weblogs are a massively decentralized conversation where millions of authors write for their own audience; the conversation arises as bloggers read each other and are influenced by each others’ thoughts. It is through the constant process of reading, writing and referencing that authors come to know each other at an informal level.” The Economist (2006) stated that although there is no consensus on the definition of a blog, it can be said that “Blogging is just another word for having conversations”. Weblog editors are normally referred to as bloggers. They are often also called grassroots reporters (Gill 2004, Wu

2003). There are cases when they checked facts for business news (BBC 2002, Hein 2007, Britt 2006). In 2002 Microsoft was caught using a “fake” ad by a Slashdot blogger. A person presented in the ad was sharing his experience of converting from Apple to Windows. The Slashdot’s blogger discovered that the person was an marketing employee of Microsoft. As a consequence, Microsoft pulled the ad. The single entries of bloggers are called “posts”. A post (or “posting”) tends to be short and often contains hyperlinks to content from other blogs or websites (Kolbitsch and Maurer 2006). The great amount of links between different blogs leads to the formation of a net often called blogosphere (Schmidt 2007) or blogistan (Cohen and Krishnamurthy 2006). Wolff (2007) defines the blogosphere as the sum of individual Blogs and their communities, so the Blogosphere is the universe of all blogs (Alby 2007).

Blog posts are usually displayed in reverse chronological order and readers may be allowed to comment on posts. Through these comments the user steps into a direct dialogue with the blogger. As Chopin (2008) rightly observed comments are often even more important than the post itself: For example there are some corporate blogs which made the blog more trustworthy through the comments of the readers (Fieseler et al. 2008). In the early days of the Internet, around the year 1997, there were only a handful of individuals who practised this form of communication, but with the emergence of simple, personal publishing tools since around 1999 the community entered an exponential growth that persists until today (Hein 2007).

Nobody knows what the exact number of blogs is. In 2006 the BBC quoted Technorati which reportedly estimated that 100,000 new blogs were being created and 1.3 million posts made daily (BBC 2006). Technorati declared in August 2009 that it indexes 133 million blogs. Although only a minority of these blogs was active, 7.4 million blogs had posted in the last 120 days and 900,000 blogs had posted in the last 24 hours at the moment of data acquisition (Winn 2009). The “The State of the Blogosphere 2010” study showed that over half of its 7.200 respondents planned on blogging more frequently in the future, and 43% planned on expanding the topics that they blog about (Sobel 2010). Although the studies of Vickery and Wunsch (2003) and Berlecon (2007) show that blogs are still not sufficiently used in companies (Britt 2006), 48% of all bloggers asked by Technorati believed that more people would be getting their news and entertainment from blogs in the next five years than from the traditional media since the consumers’ trust in mainstream media is dropping (Sobel 2010).

The most common topics on blogs are private issues; however there are also discussions about companies, services, strategies and products (Blood 2002). Respondents of the Technorati study said that the most common thing that influences the topics they blog about are conversations with friends. 42% of the respondents said that they blog about brands they love or hate, while 34% said that they never talk about brands on their blog (Sobel 2010). The traditional tactics which allowed monitoring of moves of the competitors through observation of traditional media (manual monitoring, service of press clipping companies) simply cannot keep pace with this volume of

information (Kim 2006, p. 154). According to Sobel (2010) “blogs outpace other SM and many traditional media in terms of generating consumer recommendations and purchases” (Sobel 2010, p. 3).

#### 4.1.2. Blogs as source of primary CI information

Many scientists see the Internet as a source of secondary data. However as was already mentioned, the advent of SM has made the Internet too diverse to be treated as a single type of source, thus calling for a re-evaluation of this classification. On the one hand, some blogs simply repost or aggregate and discuss information which comes from other sources, thus reproducing - albeit on a smaller scale - the functionality of online newspapers (Backstrom et al. 2009). On the other hand, most blogs are used by their authors as a platform for the dissemination of their personal opinions or the recounting of personal experiences (Pikas 2005, Xu et al. 2011, Wu 2003). Even though this alone would allow to argue that at least some blogs fulfil the prerequisites to be called a source of primary information, the real wealth of such data comes from the social aspect of this platform. Almost all blogs have their entries open for comment by users. In a few rare cases one can observe a commenter quoting another article to contradict or support the point made by the original posting, which would clearly be an example of secondary data. The bulk of these comments however are just a few sentences long, with anonymous visitors jotting down a quick thought concerning a specific part of the original posting before moving on. Hardly any commenter takes the time to actually research their answer on the spot and to provide citations. As such, the overwhelming majority of the comments posted on any blog - regardless of whether the original was of a primary or a secondary character - can definitely be classified as primary data. They come, so to speak, directly from the mind of the poster to the screen of the reader. As was appropriately described by *The Economist*: blogging is “an outlet for pure self-expression”, and “the essence of blogginess is ‘the unedited voice of a single person’” (*The Economist* 2006).

It is even possible to go further than simply classifying blogs as a source of primary information. An especially valuable type of primary data is HUMINT since it allows to link opinions to a concrete person with known preferences, background and bias. Normally, the Internet is famous for providing anonymity (or at least an effective illusion thereof). In the case of blogs though people often sign their postings with their full name, or with an alias and a link to their personal blog where further - often very detailed - contact information can be found. More private information, such as their place of work, is rarely given but with the provided information it is quite easy to find such deep information as the name of the employers, their age and interests. This can be done using tools such as people search engines or social networks. Having this information it is quite easy to detect for instance whether a specific author is part of the stakeholders group or not. A closer look at previous postings and the activity of the author in other SM also helps to assess the reliability and motivation of the author. As

such, blogs can not only be seen as an ever-growing source of primary information, but some of the data present therein may even be seen as HUMINT.

Unfortunately, not all HUMINT can be used for CI. As anybody who has spent time observing SM knows many of the blogs are filled with personal accounts of trips, pets' habits and similar things - people tend to write about anything that is important to them. Fortunately, two things which are relevant for CI are also important for many people: work and consumption, which leads to people sharing details such as their previous work experience with readers (Ohara 2010).

Blogs often reveal public information that many companies would rather have not get out (Britt 2006). For example, a Google employee unveiled his compensation in a blog. Pikas (2005) wrote about several further examples of employees writing about the situation at their workplace or about the products on their private blogs. There were examples of an employee at Google who lost his job due to reports on everyday life at work on his blog (Cone 2005), a Microsoft contractor who posted pictures of Apple computers at a company site being fired (Bishop 2003) and similar stories of employees at Delta Airlines, ESPN, and Waterstone Books. Accounts of employees blogging openly about work appear regularly (Effimova and Grudin 2007, Cone 2005). Many employees described blogging as a way to share their passion for their work and to communicate directly with others inside and outside the organization (Johnson and Kaye 2004). There are also people who design and develop a product and often have unique information but are separated from customers and users by intermediaries in sales, marketing, and field support. These people often have the desire to enter into a direct dialogue with the users of their products and they use blogs for this purpose (Effimova and Grudin 2007).

Furthermore blogs are often used for product reviews (Pikas 2005). Such sites often gain a great popularity among Internet users since people tend to trust other people similar to them. In the "Top Posts of 2010" list of Sobel (2010) in which posts that most other bloggers linked to in 2010 are listed 28% are product or service reviews. The remainder are opinions about politics, music and other general things. Although they are a minority, each product review generated on average 473 comments whereas general postings generated only an average of 189 comments. These numbers show the great interest that users show concerning product reviews. Different stakeholders (users, developers, opinion leaders etc.) wrote in these product reviews about the usability of specific products and in one case even called for the boycott of a product. The customers furthermore wrote about their likes and dislikes and why they prefer specific products to others. They described marketing and sales tactics of different companies and how they perceived them.

To sum up, blogs usually have a raw, unpolished authenticity and individuality. They contain a huge wealth of primary data and HUMINT, some of which is highly relevant for CI since it is a sincere representation of the thoughts of stakeholders and people with inside knowledge.

## 4.2. Forum

### 4.2.1 Definition and importance

An Internet forum, also known as a message board or “virtual community” (Rheingold 1993), is an online place in which users may discuss or read the discussion of others. These conversations form topics known as threads. Each thread consists of temporarily archived messages known as posts. The archiving allows to access historical posts of a specific author or concerning a specific topic and therefore helps to better understand the motivation and arguments of an author. Specific threads lose their popularity over time. An important event or the release of a new product version may reactivate the interest for a specific topic and provoke a new bulk of posts (Pitta and Fowler 2005). Depending on the forum authors may have to register prior to writing and reading posts and a moderator may need to approve a post before it becomes visible to others. Forums are one of the first online places where Internet users met to discuss their topics of interest. The movement towards the Web 2.0 however increased the users’ engagement also in this online discussion place (Fisch and Gscheidle 2008).

According to a study of the Keller Fay Group there are 240 millions online discussions (in chats, communities, forums) per day. In about 50% of those talks product preferences are discussed. A study of Chevalier and Mayzlin (2006) shows that these opinions have a huge impact on consumer decisions. Usually people search for product and price information online. They post their questions or ask for advice and more information. Community members consult them and a few reasonable products are suggested. Then the potential buyer can use other communities or web pages for reviews about those products and can further compare them with each other.

Online forums and blogs offer the chance not only to detect visible information such as price changes but are also very helpful when searching for information such as service improvements of competitors or their new deals with partners and customers (Urbany and Montgomery 1998). Online forums give the opportunity to conduct both passive and active research. They offer an easy and cost-effective opportunity to measure word of mouth (Godes and Mayzlin 2004). According to Pitta and Fowler (2005, p. 266) using forums one can “(...) observe a community of interest directly: their expressed preferences, satisfaction or dissatisfaction, and use of products or services they have in common.” Listening to the feedback of the stakeholders, companies can improve their service or products.

Although there are some similarities between Forums and Blogs, the main difference between those both places lays in the direction of the discussion. In a Blog there is usually a 1:n communication whereas in a Forum n:n communication takes place. Both are very well-linked and are usually very highly indexed in search engines. Therefore if current or potential stakeholders would like to inform themselves or discuss a product, service or topic the probability that they will first come across a post from a forum or a blog after using search engines is very high (Fank 2009).

#### 4.2.2 Forums as source of primary CI information

The online forum is usually used to discuss a specific topic with people who share common interests. Thus forums are often places in which users share their experience and attitudes towards products and vendors (Bartl et al. 2008, Kozinets 2002, Xu et al. 2011). One question or experience may result in a long discussion. There are many technical forums where support technicians ask questions or post issues that they face while working in the field (Koll 2008). It is surprising how much intelligence can be obtained only by asking (Harkleroad 1992). There are also important unofficial brand web forums run by customers (Muniz and O'Guinn 2001). An example would be the forum [niketalk.yuku.com/bniketalk](http://niketalk.yuku.com/bniketalk) where costumers of the company NIKE discuss the products of Nike. They write about when and how they use them and which features could be improved.

Forums are also often a place where employees complain about their companies, discuss problems in their work or where potential employees search for opinions from the insiders. Fuld (1996) has pointed out that there may be some CI information in the discussion groups already in 1996. He was at that time rather sceptical and warned that the data may be inaccurate. He suggested verifying rumours and double-checking of the "so-called facts" (Fuld 1996, p. 90). Kahaner (2000) also wrote about experts who used newsgroups, which were predecessors of forums, in order to find information about troubles with new products. There were even voices which encouraged monitoring of discussion groups on competitors in newsgroups since the majority of this information is written by direct relevant stakeholders such employees, customers or partners (Cronin et al. 1994, Graef 1997, Haynes et al. 1998).

Netnography, the analysis of online communities' members (Bartl et al. 2008), shows that teenagers (from 14 to 19 years old) are the most active participants in forums (Fisch and Gscheidle 2008). Depending on the market field, they may be an important part of the consumers and they are the employees of the future. However not only teenagers are familiar with and active within forums. Since it is quite easy for everybody to actively participate in a forum examples of each age group and profession may be found among the users. In their posts users usually mention what they do and who they work for. Using search engines and social network web sites such as Facebook or LinkedIn CI analysts have the opportunity to verify the data. The identity of the author or discussion participant is quite easy to determine since the authors leave different paths of their identity on the Internet or simply put their detailed address information in their member profile while registering on a forum.

Generally, for Forums the same argumentation holds true as for Blogs - they are a rich source of information, most of which can be seen as primary data or even HUMINT.

## 4.2. Microblogs

### 4.2.1. Definition and importance

A microblog is another type of web log. It is a broadcast medium which allows users to “(...) exchange small elements of content such as short sentences, individual images, or video links” (Kaplan and Haenlein 2011, p. 2). The most popular of these platforms is Twitter. Rafter (2009) described Twitter as a “giant chat room, but instead of person-to-person conversations, with a mouse click one person can instantly beam a message to however many Twitter users have signed in” (Rafter 2009).

Microblog users write short texts limited in length (mostly to below 200 characters) in order to express themselves. These messages often include links to web pages, blogs or news where more information is available. Consequently one of the characteristics of microblogs is a high degree of self-disclosure (Kaplan and Haenlein 2011, p. 2). Furthermore they are a very quick medium, able to spread information faster than e-mail or blog posts. This allows monitoring of online opinions, observations and news as they happen. For instance Twitter was the first source of information about events such as the terror attacks in the two luxury hotels in Mumbai or the emergency landing of an Airbus on the Hudson River in New York (Cellan-Jones 2009). As a result Twitter became popular among journalists searching for a new story (Cellan-Jones 2009, Decker et al. 2005). Professor Sreenath Sreenivasan sees Twitter as an “informal but highly influential news recommendation and distribution network” (Lohr 2009).

Microblogs in general and Twitter in particular have accelerated the news cycle through this potential to quickly disseminate interesting information. The number of registered Twitter users reached 175 million in September 2010 (Twitter 2010). Some authors suggest that at least 80% of those users are inactive (Kaplan and Haenlein 2011) - but the remainder still generates 95 Million tweets per day (Twitter 2010). Between 5.000 and 10.000 new accounts are registered on Twitter daily (Winterbauer 2009). As the numbers above suggest Twitter shows the typical distribution of roles in SM. According to Kaplan and Haenlein (2011) there are a few influential content creators who provide information to many content consumers. The top 10% of active Twitter users account for over 90% of all tweets. Sysomos Inc. (Cheng et al. 2009) in its study from July 2009 has analysed 11.5 million Twitter accounts and found that:

- 72.5% of all Twitter users joined during the first five months of 2009
- 85.3% of all Twitter users post less than one update per day
- 93.6% of users have less than 100 followers, while 92.4% follow less than 100 people
- 5% of Twitter users account for 75% of all activity

#### 4.2.2. Twitter as a source of primary data

Although Twitter in popular culture is often associated with teenagers, Forrester Research showed in a study that more than one third of all Twitter users are 35 years and older, with an average household income of \$85,000 per year (Kaplan and Haenlein 2011). This part of the user base represents a demographic which is likely to possess strategic information which could be relevant for CI.

Stauffer (2003) stressed the importance of sensitive data which may be revealed by employees in informal settings such as stays in hotels, flights, breaks at conferences etc. Ives (2009) also observed how easy it is to gather information concerning customer experiences and sales approach through idle chit-chat at airports while waiting for a flight. Although for ethical reasons a competitor's current or former employees should not be actively targeted for gathering such data (Fitzpatrick 2003), those people often talk about their experience and knowledge on their own without the need for unethical elicitation methods. The challenge is finding all of the places where it happens and being there to hear it - and according to Ives (2009), Twitter helps do just that since it “takes the Airport Waiting Area Syndrome Global”. While doing CI in the airport waiting area analysts may be able to listen to a few conversations, using Twitter they have access to tweets from millions of registered users. Among them one can expect stakeholders' representatives of all kind. As such, Ives (2009) claims that “Twitter opens up a whole new way to give away your company secrets to anyone anywhere who wants to listen' and follows up with a very concrete example: “I was talking with a marketing person who subscribes to his competitors Twitter feeds. He finds that they often discuss recent sales calls on Twitter”. While this is an especially shocking example, a study by the German “Arbeitsgemeinschaft Online Forschung” showed that even seemingly trivial tweets written by employees at home or at the workplace may provide helpful insights (AGOF 2008). While the employees may believe that they are posting about minor company events, they may be giving the last missing piece in the puzzle to a competitor's analyst. Even if no information concerning the workplace of a twitter user is given in their profile, this does not make discussing relevant CI matters safe, since given a bit of time for research a twitter account can often be linked to an account on some other SM site (such as LinkedIn, Xing or NING) which then is likely to provide the missing personal data.

The previously-cited study by Sysomos Inc. (Cheng et al. 2009) shows that some PR professionals have already discovered this wealth of information that is provided by Twitter, as well as the importance of hearing rather than being heard:

- 21% of all Twitter users have never posted a Tweet
- Of the people who identify themselves as PR professionals, 65.5% have never posted a Tweet
- 0.29% of all Twitter users follow more than 2,000 people

- Of the people who identify themselves as PR professionals, 15% follow more than 2,000 people

This holds true not only when gathering information about competitors but also to a certain degree when finding out how to better please customers. One company which has embraced this approach is Dell, where a team called “Communities and Conversations”, which involves about 40 employees from departments such as Finance, HR, Purchasing, Shipping, Logistics has been created (Kaplan and Haenlein 2011). One of the tasks of this team is finding out what problems bother the customers and communicating with those affected. Since it is very easy to post a tweet and very many people already have an account, this is the perfect channel to air one's frustration with a product or company, making Twitter a very valuable resource for teams such as “Communities and Conversations”. Another way to tap this power of Twitter is to specifically ask the users to contribute instead of passively listening. Starbucks for instance regularly encourages its roughly 300,000 followers to send out ideas and comments. Using the “My Starbucks Idea” channel customers can suggest modifications regarding the company's product and service offerings. Other users can then read the ideas and vote in favour of or against them. The channel can easily be monitored by competitors.

All those examples show that Twitter may be considered as a source of primary data for CI. Furthermore many PR and Marketing Managers see a large potential in Twitter as an early warning system as it allows finding information about things in nearly real time as they happen (Competisaurus 2008). According to Kringsman, 'Twitter is a competitive-intelligence dream tool' (Rafter 2009). Unfortunately, the question of how to efficiently find the relevant information in the flood of Millions of daily tweets remains a challenge.

## **5. Conclusion**

The examples presented here show that the classical view of the Internet as a source of secondary data needs to be revised. While this approach was appropriate before the advent of SM, the emergence of highly popular and widely adopted online communities where people freely share their thoughts has transformed the nature of information on the Internet. As has exemplarily been shown for blogs, forums and microblogs, these communities offer a wealth of primary information which has a potential to be highly relevant for CI. This warrants a shift of focus in the data collection process of the CI cycle towards the Internet. Still, it is important to keep in mind that this new source of information is very young and many challenges remain when relying on it. One of the most important problems which still need to be addressed is the assessment of the quality and integrity of the data which can be found in SM (Wheaton and Chido 2007).

## References

- AGOF (2008). Internet facts 2008-IV. <http://www.agof.de/index.566.html>. [31.07.2009].
- Aguilar F. (1967). *Scanning the Business Environment*. New York: MacMillian.
- Alby T. (2007). *Web 2.0*. München: Carl Hanser Verlag.
- Altensen A. (2003). *Stellenwert und Verbreitung von Competitive Intelligence in Deutschland und im deutschsprachigen Raum*. Gießen-Friedberg: Diplomarbeit FH Gießen-Friedberg, Fachbereich Wirtschaft.
- Alvarez A. (2007). Creating Collaboration: Best Practices from Latin America. *Competitive Intelligence Magazine*, 10(6):13-18.
- American Productivity and Quality Centre (2000). Developing a Successful Competitive Intelligence Program: Enabling Action, Realizing Results. [www.apqc.org/pubs/summaries/CMSUCCESSCI.pdf](http://www.apqc.org/pubs/summaries/CMSUCCESSCI.pdf). [18.02.2007].
- Attaway M. C. (1998). A Review of Issues Related to Gathering and Assessing Competitive Intelligence. *American Business Review*, January:25-35.
- Ayyub B. M. (2001). *Elicitation of Expert Opinions for Uncertainty and Risks*. Florida: CRC Press.
- Backstrom L., Leskovec J. and Kleinberg J. (2009). Meme-tracking and the Dynamics of the News Cycle. Paper presented at 15th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD-09).
- Barndt W. D. (1994). *User-Directed Competitive Intelligence: Closing the Gap between Supply and Demand*. Westport: Quorum Books.
- Bartl M., Hück S. and Landgraf R. (2008). Information pur. Netnography erschließt Online-Communities als Innovationsquelle. *Research and Results*, 1:28-29.
- BBC (2002). Web users turn tables on Microsoft. <http://news.bbc.co.uk/1/hi/technology/2329519.stm>. [05.11.2009].
- BBC. (2006). Blogosphere sees healthy growth. <http://news.bbc.co.uk/2/hi/6129496.stm>. [04.12.2010].
- BBC (2009). 'Millionth English word' declared. <http://news.bbc.co.uk/2/hi/8092549.stm>. [09.09.2010].
- Berlecon (2007). Enterprise 2.0 in Germany. Prevalence, opportunities and challenges. A study commissioned by CoreMedia. <http://www.coremedia.com/coremedia.aspx/services/downloads/downloadcenter/language=en/id=87424/downloadcenter.html>. [09.11.2007].
- Bishop T. (2003). Microsoft fires worker over weblog. [http://www.seattlepi.com/business/146115\\_blogger30.html](http://www.seattlepi.com/business/146115_blogger30.html). [20.03.2010].
- Blood R. (2002). *We've Got Blog: How Weblogs Are Changing Our Culture*. Cambridge Massachusetts: Perseus.
- Britt P. (2006). The new competitive intelligence: Raising the confidence quotient. *KMWorld*, November/December:10-24.

- Cellan-Jones R. (2009). Twitter and a classic picture. [http://www.bbc.co.uk/blogs/technology/2009/01/twitter\\_and\\_a\\_classic\\_picture.html](http://www.bbc.co.uk/blogs/technology/2009/01/twitter_and_a_classic_picture.html). [16.01.2009].
- Charles A. (2007). Over-reliance on the Web for Competitive Intelligence Information. *Competitive Intelligence Magazine*, 10(3):23-26.
- Cheng A., Evans M. and Singh H. (2009). Inside Twitter. An In-Depth Look Inside the Twitter World. <http://www.sysomos.com/insidetwitter/>. [17.08.2009].
- Chevalier J. A. and Mayzlin D. (2006). The Effect of Word of Mouth on Sales: Online Book Reviews. *Journal of Marketing Research*, 43(3):345-354.
- Chopin K. (2008). Finding communities: alternative viewpoints through weblogs and tagging. *Journal of Documentation*, 64(4):552-575.
- Coffman B. S. (1997). Weak signal research: part I-V. *Journal of Transition Management*. <http://www.mgtaylor.com/mgtaylor/jotm/winter97/wsrintro.htm> [15.03.2011]
- Cohen E. and Krishnamurthy B. (2006). A short walk in the Blogistan. *Computer Networks*, 50(5):615-630.
- Collins P. (2002). One-Third of Fast-Growth CEOs Place Higher Importance on Competitor Information Than a Year Ago. *PricewaterhouseCoopers*. Trendsetter Barometer <http://www.barometersurveys.com/production/barsurv.nsf/4d3e5784001f780185256b89007aa641/03295df410ae990a85256ba6000013ac?OpenDocument>. [18.03.2011].
- Competisaurus (2008). Twitter as a Competitive Intelligence Tool? <http://competisaurus.wordpress.com/2008/10/16/twitter-as-a-competitive-intelligence-tool>. [15.03.2011].
- Cone E. (2005). Rise of the Blog. <http://www.ciainsight.com/c/a/Past-News/Rise-of-the-Blog/>. [20.03.2011].
- Conlon G. (2009). Live From Gartner CRM UK: Social Media Optimization Is Marketing's Next New Discipline. [http://www.1to1media.com/weblog/2009/03/live\\_from\\_gartner\\_crm\\_uk\\_socia.html#more](http://www.1to1media.com/weblog/2009/03/live_from_gartner_crm_uk_socia.html#more). [07.07.2009].
- Cottrill K. (1998). Turning Competitive Intelligence into Business Knowledge. *Journal of Business Strategy*, July/August:27-30.
- Cronin B., Overfelt K., Fouchereaux K., Manzvanzvike T., Cha M. and Sona E. (1994). The internet and competitive intelligence: A survey of current practice. *International Journal of Information Management*, 14(3):204-222.
- Culnan M. J. (1983). Environmental Scanning: The Effects of Task Complexity and Source Credibility on Information Gathering Behavior. *Decision Sciences*, 14:194-206.
- Decker R., Wagner R. and Scholz S. W. (2005). An internet-based approach to environmental scanning in marketing planning. *Marketing Intelligence and Planning*, 23(2/3):189-199.
- Dellarocas C. (2006). Strategic Manipulation of Internet Opinion Forums: Implications for Consumers and Firms. *Management Science*, 52(10):1577-1593.

- Deng Z. and Luo L. (2007). An Exploratory Discuss of New Ways for Competitive Intelligence on WEB2.0. in Wang W., Li Y., Duan Z., Yan L., Li H. and Yang X. (eds.) *Integration and Innovation Orient to E-Society*, Volume 2. Boston: Springer.
- digimind redbook (2009). Consumer Insight. <http://www.digimind.com/cat/publications/>. [07.07.2009].
- DiNucci D. (1999). Fragmented Future. *Print: Design & New Media*, 53(4):32.
- The Economist (2006). It's the links, stupid. [http://www.economist.com/node/6794172?story\\_id=6794172](http://www.economist.com/node/6794172?story_id=6794172). [15.03.2011].
- Edelman Public Relations (2008). 2008 Annual Edelman Trust Barometer. [http://www.edelman.com/trust/2008/prior/2006/FullSupplement\\_final.pdf](http://www.edelman.com/trust/2008/prior/2006/FullSupplement_final.pdf) . [05.11.2009].
- Efimova L. and Grudin J. (2007). Crossing Boundaries: A Case Study of Employee Blogging in *Proceedings of the 40th Annual Hawaii International Conference on System Sciences*. Washington, DC, USA: IEEE Computer Society.
- Erdelez S. and Ware N. (2001). Finding competitive intelligence on Internet start-up companies: a study of secondary resource use and information-seeking processes. *Information Research*, 7(1).
- Fank M. (2008). *Status Quo von Webmonitoring in Unternehmen* (Technical report). Köln: Fachhochschule Köln.
- Fank M. (2009). *Studie über Blogger und Foren-Betreiber. Ergebnisse einer empirischen Forschung* (Technical report). Köln: Fachhochschule Köln.
- Fieseler C., Fleck M. and Stanoevska-Slabeva K. (2008). Corporate Blogs – Kundendialog im Netz mit hohem Anspruch. *Marketing Review*, St. Gallen 4:40-44.
- Fisch M. and Gscheidle C. (2008). Mitmachnetz Web 2.0: Rege Beteiligung nur in Communities. *Media Perspektiven*, 7:356-364.
- Fitzpatrick W. M. (2003). Uncovering Trade Secrets: The Legal and Ethical Conundrum of Creative Competitive Intelligence. *SAM Advanced Management Journal*, Summer:4-13.
- Fleisher C. S. and Blenkhorn D. L. (2000). *Managing frontiers in competitive intelligence*. Westport, Connecticut: Quorum Book.
- Fuld L. (1996). Beginner's guide to world-class snooping. *Forbes*, 03.06.1996:90.
- Fuld L. M. (1995). *The new competitor intelligence: the complete resource for finding, analysing, and using information about your competitors*. New York: Wiley.
- Fuld L. M. (2006). *The Secret Language of Competitive Intelligence*. New York: Crown.
- Gilad B. (1989). The Role of Organized Competitive Intelligence in Corporate Strategy. *Columbia Journal of World Business*, Winter 1989:29-35.
- Gilad B. (2004). *Early warning Using Competitive Intelligence To Anticipate Market Shifts, Control Risk And Create Powerful Strategies*. New York: Amacom.
- Gill K. E. (2004). How can we measure the influence of the blogosphere? [http://faculty.washington.edu/kegill/pub/www2004\\_blogosphere\\_gill.pdf](http://faculty.washington.edu/kegill/pub/www2004_blogosphere_gill.pdf) . [15.03.2011].

- Global Intelligence Alliance. (2005). Competitive Intelligence in Large Companies. *Technical report*, GIA White Paper.
- Godes D. and Mayzlin D. (2004). Using Online Conversations to Study Word-of-Mouth Communication. *Marketing Science*, 23(4):545-560.
- Graef J. (1997). Using the internet for competitive intelligence: A survey report. *Competitive Intelligence Review*, 8(4):41-47.
- Harkleroad D. H. (1992). Competitive Intelligence: A new Benchmarking Tool. *Management Review*, October:26-29.
- Haynes P. J., Becherer R. C. and Helms M. M. (1998). Small and mid-sized businesses and Internet use: unrealized potential? *Internet Research: Electronic Networking Applications and Policy*, 8(3):229-235.
- Hein A. (2007). *Web. 2.0*. Planegg: Rudolf-Haufe-Verlag.
- Hemphill T. A. (2002). Oracle vs. Microsoft: Corporate Espionage or Competitive Intelligence?. *Business and Society Review*, 107(4):501-511.
- Imperato G. (1996). Competitive intelligence-Get smart. <http://www.fastcompany.com/magazine/14/intelligence.html>. [10.07.2009].
- Ives B. (2009). Twitter Takes the Airport Waiting Area Syndrome Global. [http://billives.typepad.com/portals\\_and\\_km/2009/02/the-airport-waiting-area-syndrome-goes-global-with-twitter.html](http://billives.typepad.com/portals_and_km/2009/02/the-airport-waiting-area-syndrome-goes-global-with-twitter.html) . [04.01.2011].
- Jain S. (1984). Environmental Scanning in U.S. Corporations. *Long Range Planning* 17 (2):117-128.
- Jaworski B. J., Macinnis D. J. and Kohli A. K. (2002). Generating Competitive Intelligence in Organizations. *Journal of Market-Focused Management*, 5:279-307.
- Johnson A. (1999) Internet news clipping services: how companies keep on top of their Markets. *networker*, 3(3):30-35.
- Johnson T. J. and Kaye B. K. (2004). Wag the blog: How reliance on traditional media and the Internet influence perceptions of credibility of weblogs among blog users. *Journalism and Mass Communication Quarterly*, 81(3):622-642.
- Kahaner L. (1996). *Competitive intelligence: from black ops to boardrooms how businesses gather, analyze, and use information in the global market place*. New York: Simons and Schuster.
- Kahaner L. (1997). *Competitive Intelligence: How to Gather Analyze and Use Information to Move Your Business to the Top*. New York: Simon and Schuster.
- Kahaner L. (2000). Keeping an I on the competition. *Information Week*, 805:97-103.
- Kaplan A. M. and Haenlein M. (2010) Users of the world, unite! The challenges and opportunities of Social Media. *BUSINESS HORIZONS*, 53(1):59-68.
- Kaplan A. M. and Haenlein M. (2011). The early bird catches the news: Nine things you should know about micro-blogging. *BUSINESS HORIZONS*, 54(2):105-113.
- Kassler H. S. (1997). Mining the internet for competitive intelligence. *Online*, 21(5):34-45.

- Keegan W. J. (1974). Multinational Scanning: A Study of the Information Sources Utilized by Headquarter Executives in Multinational Companies. *Administrative Science Quarterly*, 19:411-421.
- Kefalas A. and Schoderbeck P. P. (1973). Scanning the Business Environment: Some Empirical Results. *Decision Sciences*, 4:63-74.
- Kim P. (2006). *The Forrester Wave™: Brand Monitoring, Q3 2006* (Technical report). Forrester white paper.
- Kolbitsch J. and Maurer H. (2006). The Transformation of the Web: How Emerging Communities Shape the Information we Consume. *Journal of Universal Computer Science*, 12(2):187-213.
- Koll S. (2008). Zusammenarbeit: Softwaretools sorgen für Schnelligkeit. Das Wissen der Worker wandert ins Web 2.0. *Industrie Anzeiger*, 52:46.
- Kozinets R. V. (2002). The Field behind the Screen: Using Netnography for Marketing Research in Online Communities. *Journal of Marketing Research*, XXXIX:61-72.
- Laningham S. (2006). developerWorks Interviews: Tim Berners-Lee. <http://www.ibm.com/developerworks/podcast/dwi/cm-int082206txt.html> [30.04.2009].
- Lietsala K. and Sirkkunen E. (2008). *Social Media. Introduction to the tools and processes of participatory economy*. Tampere: University of Tampere.
- Lohr S. (2009). Study Measures the Chatter of the News Cycle. *Competitive Intelligence Magazine*, 13 July:B1.
- Marlow C. (2006). Audience, structure and authority in the weblog community in Diemand V., Mangold M. and Weibel P. (eds.) *Weblogs, Podcasting und Videojournalismus - Neue Medien zwischen demokratischen und ökonomischen Potenzialen*. Hannover: Heise Verlag.
- McGonagle J. J. and Vella C. M. (1996). *A new archetype for competitive intelligence*. Westport, Connecticut: Greenwood Publishing Group.
- McGonagle J. J. and Vella C. M. (2002b). A Case for Competitive Intelligence. *The Information Management Journal*, 36(4):35-40.
- Michaeli R. (2006). *Competitive Intelligence. Strategische Wettbewerbsvorteile erzielen durch systematische Konkurrenz-, Markt- und Technologieanalysen*. Berlin. Heidelberg: Springer-Verlag.
- Miller J. P. (2000). *Millennium Intelligence: Understanding and Conducting Competitive Intelligence in the Digital Age*. Medford: CyberAge Books.
- Muniz A. M. J. and O'Guinn T. C. (2001). Brand Community. *Journal of Consumer Research: An Interdisciplinary Quarterly*, 27(4):412-32.
- Nolan J. (1999). *Confidential: uncover your competitor's top business secrets legally and Quickly - and protecting your own*. New York: Harper Collin Publishers.
- Ohara D. (2010). Who will replace the departed Oliver Sanche at Apple?. <http://www.greenm3.com/2010/12/who-will-replace-the-departed-oliver-sanche-athtml>. [08.12.2010].

- Pikas C. (2005). BLOG Searching for Competitive Intelligence, Brand Image, and Reputation Management. *Online*, 29(4):16-21.
- Pitta D. A. and Fowler D. (2005). Internet community forums: an untapped resource for consumer marketers. *Journal of Consumer Marketing*, 22(5):265-274.
- Porter M. E. (1980). *Competitive Strategy. Techniques for Analyzing Industries and Competitors*. New York: Quorum Books.
- Potter K. (2001). Elicitation techniques: core tools for human source collection. *Paper presented at 16th Annual conference of the Society of Competitive Intelligence Professionals (SCIP)*.
- Rafter M. V. (2009). Taming Twitter: Did They Really Just Say That?. <http://www.workforce.com/section/software-technology/feature/taming-twitter-did-they-really-just-say-that/index.html>. [04.01.2011].
- Rheingold H. (1993). *Virtual Community: Homesteading on the Electronic Frontier*. New York: Addison-Wesley.
- Rothwell K. (2008). Tools Analysts need to do Their Job. *Competitive Intelligence Magazine*, 11(1):53-54.
- Roukis G. S., Conway H. and Charnow B. H. (1990). *Global corporate intelligence: opportunities, technologies, and threats in the 1990s*. New York: Quorum Books.
- SCIP web page (2008a). About SCIP. [http://www.scip.org/2\\_overview.php](http://www.scip.org/2_overview.php). [05.01.2008].
- Shinsuke N., Jun'ichi T., Yoshinori H. and Katsumi T. (2005). Discovering Important Bloggers based on Analyzing Blog Threads. *IEIC Technical Report* (Institute of Electronics, Information and Communication Engineers), 105(171):23-28.
- Sobel J. (2010). State of the Blogosphere 2010. <http://technorati.com/blogging/feature/state-of-the-blogosphere-2010/>. [03.12.2010].
- Stanton W. J., Etzel M. J. and Walker B. J. (1994). *Fundamentals of Marketing*. New York: McGraw-Hill.
- Stauffer D. (2003). The Power of Competitive Intelligence. Your competitors' data is there for taking. The bigger challenge: How to make use of it. *HarvardManagementUpdate*, October:3-4.
- Strategy Analytics (2007). The People's Revolution: Implications of Web 2.0 and Social Media Applications. <http://www.strategyanalytics.net/default.aspx?mod=ReportAbstractViewer&a0=3688>. [22.09.2010].
- Teo T. S. H. and Choo W. Y. (2001). Assessing the impact of using the Internet for competitive intelligence. *Information & Management*, 39(1):67-83.
- Twitter. (2010). About Twitter. <http://twitter.com/about>. [03.01.2011].
- Tyson K. W. M. (1998). *The complete guide to competitive intelligence*. Chicago: Kirk Tyson International.
- Urbany J. E. and Montgomery D. B. (1998). Rational Strategic Reasoning: An Unnatural Act? *Marketing Letters*, 9(3):285-299.

- Vickery G. and Wunsch V. S. (2003). Participative Web and User-Created Content. WEB 2.0, Wikis and Social Networking. France: OCED. <http://213.253.134.43/oecd/pdfs/browseit/9307031E.PDF>. [07.11.2007].
- Walker R. (2009). IAB. Social Media Ad Metrics Definitions. [http://www.iab.net/ugc\\_metrics\\_definitions](http://www.iab.net/ugc_metrics_definitions). [25.08.2009].
- Wheaton K. and Chido D. (2007). Evaluating Intelligence. *Competitive Intelligence Magazin*, 10(5):19-23.
- Wilkins R. L. (2007). Competitive Intelligence: The New Supply Chain Edge. *Supply Chain Management Review*, January/February:18-27.
- Winn P. (2009). State of the Blogosphere 2008: Introduction. <http://technorati.com/blogging/article/state-of-the-blogosphere-introduction/> [04.12.2010].
- Winterbauer S. (2009). Erfolgstrategien für Medien im Social Web. [http://meedia.de/background/meedia-blogs/stefan-winterbauer/stefan-winterbauer-post/archive/2009/february/article/erfolgstrategien-fr-medien-im-social-web\\_100016421.html?tx\\_ttnews%5BbackPid%5D=1692&cHash=1f4e859a3ae307c218f111e2aaf64d45](http://meedia.de/background/meedia-blogs/stefan-winterbauer/stefan-winterbauer-post/archive/2009/february/article/erfolgstrategien-fr-medien-im-social-web_100016421.html?tx_ttnews%5BbackPid%5D=1692&cHash=1f4e859a3ae307c218f111e2aaf64d45). [27.03.2011].
- Wittmann W. W. (1990). Brunswik-Symmetrie und die Konpetition der Fünf-Datenboxen. Ein Rahmenkonzept für umfassende Evaluationsforschung. *Zeitschrift für pädagogische Psychologie*, 4:241-251.
- Wolff P. (2007). *Die Macht der Blogs*. Frechen: Datakontext-Fachverlag.
- Wu X. M. (2003). The information dissemination of blog news at the WEB2.0 times. *Journal of Xuzhou Normal University*, 32(3):130-137.
- Wunsch-Vincent S. and Vickery G. (2007). Working Party on the Information Economy. Participative Web: User-Created Content. Organisation for Economic Cooperation and Development DSTI/ICCP/IE(2006)7/FINAL:1-74.
- Xu K., Liao S. S., Li J. and Song Y. (2011). Mining comparative opinions from customer reviews for Competitive Intelligence. *Decision Support Systems*, 50(4):743-754.
- Zhao J. and Jin P. (2009). Ontological Foundation for Enterprise. Competitive Intelligence in the Web - in Huangshan P. (ed.) *Proceedings of the 2009 International Symposium on Information Processing*, China.