Considerations on User Needs for the Internet

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Abstract. This paper reports on a project on a mental health service offered on the web for young people, who have drug problems, especially with ecstasy. The service is offered by the Medical University of Luebeck and was developed in interdisciplinary co-operation between medicine, computer science and design. The focus of the project was on meeting user-specific needs: providing information and help for young people and for their peer-groups. A pre-condition for success is to design the medium according to the user needs, which means an adequate use of the medium. We provide some usage data, which reveal a need for that kind of web service.

Compared with other psychotherapeutic counseling-services which are common in the USA for several years and which increase in Europe as well, there are some main differences. The e-mail and counseling service is for free although it is provided by a professional psychotherapist. He is an expert in the subject area of ecstasy addiction and works also with young drug addicts in drug clinics. The work is based on strict confidentiality as it is given in consultations outside the web. Furthermore, the project applies technology enabling anonymous and unobservable internet use.

The authors argue that counseling on the web is a kind of communication which needs adequate technologies for anonymous transfer of data in order to protect privacy for the information seeking communication partner. However, there is a discrepancy between the requirements put forward by communication needs of users and the public discussion on prohibiting anonymity. Furthermore, from a perspective of media theory, anonymity in this context opens new perspectives on innovative use of the new medium.

1 Introduction

Since the Internet is used by an increasing number of users there is a rapid growth of information and services available. Among them there is a number of services called cyber-therapy or online-counseling, which appear in German as well (cf. Baur 1999, Eichenberg 1999). When people use these services on the web, they produce a lot of personalized and highly sensitive data. In order to protect data gathered by these Web activities of people, adequate technological concepts are needed for privacy protection of this kind of communication, which requires absolute anonymity of the person who seeks for information and services. However, on the other hand there is a current public discussion on prohibiting anonymity and unobservable use on the Internet.

What is the context of the communication we talk about? Consuming drugs influences life-styles of many youngsters. They buy party drugs or designer drugs, like ecstasy (XTC) or speed, even at the school yard. According to a report there are 30 % of the young people in the age between 16-22 years in our country, who have already tried XTC when visiting a discotheque. Traditional mental health services would fail with these people, because they do not feel in danger of drug addiction. Nevertheless, XTC-users should be well informed about the drug's risks and dangers. The Internet may offer an adequate and attractive medium for mental health services for this user group as youngsters regularly surf through the WWW and use e-mail or participate in chat rooms for communication (see recent study of German TV channels ARD and ZDF).

The basic considerations on alternative use of the new media result form our project, which wants to fertilize young persons` inclination to the WWW for the purpose of preventing drug use and providing help for resulting critical life situations. A Web-Site and other Internet services were established for those reasons. The information provided on this web site (www.mesh.de) ranges from chemical facts to the risks of consuming XTC (Kritzenberger/Ruhl/Herczeg 2000). The readers of the site are given hints on what to do and how to help immediately in the case of emergency. Authentic interviews with young drug addicts staying in a drug hospital for therapy were transcribed and made available to the public. A checklist and a questionnaire, designed by a professional therapist, are offered. They are motivated by the intention to help the youngsters to gain a realistic perspective on endangering addiction to drugs. The youngsters can feel free to fill in the questionnaire and return it by e-mail to the psychotherapist. Feedback (returning the commentary by e-mail) is given for free and without further obligations.

2   On Efficiency and Ethics of Psychotherapy and Counseling Services on the Web

The Web offers a new medium for those people who seek for advice. Therefore, it proved that counseling services have become well-established in America and recently developing in Europe as well. There are many offers for online-counseling on the WWW, e.g.

- http://www.loveadvice.com (Dr. Tracy Capot, who takes 49,95 Dollars per question)
- http://www.feelgoodcounseling.cm/onlinecounsel.htm (Ask Michele...)
- http://www.healthyplace.com/CCI/
- http://www.netpsych.com/holmes (offer for online counseling by the psychotherapist Leonard Holmes)
- http://www.metanoia.org
- www.counselingcafe.com/ser_info.htm

Many of these online-counseling services are offered by psychotherapists on the basis of e-mail contacts, sometimes there is additionally consultation via chat. Information seeking persons virtually meet with a psychotherapist for private counseling, or ask questions to experts concerning emotional help. Online counseling is meant as a viable alternative source of help when traditional help is not available, e.g. if someone has no access to a therapist nearby or might be nervous or embarrassed about face-to-face counseling. Of course, these offers are not intended for people who are severely depressed or in need of clinical care. However, it is meant as an affordable solution for those who are simply going through a tough time. Licensed psychologists offer personal training for life and career, assistance for moving life toward dreams and goals by starting an online consulting service. E-mail counseling works by asking questions or telling the situation wanted help for. The person in search of help can decide whether or not he or she wants to have an on-going relationship or just a one-time session.

There are some years of experiences with this kind of counseling in the USA, but less experiences in Europe. Some examples for online-counseling in Europe are mainly self-help groups, where counseling is for free. However, it is not always sure or even intended that advice is given by a professional in the respective area of interest. In some cases it is clear, that advice is given by a professional therapist or doctor, as it is the case with the following web addresses:

- www.profa.de/sextra (ProFamilia gives advice on questions concerning sexuality and pregnancy)
- http://www2.telecom.at/femwien/jugend.htm (online-counseling offered by the Austrian Society for Family Planning for Young People)
- http://www.telefonseelsorge.de/beratung/index.html (German telephone samaritans)

A new (since March 2000) mental health service in Germany is www.lifeline.de/navigagtion/index.html. Under the motto of "putting your questions to a doctor and get an answer" the web site offers e-mail contact, a chat café, tests and information on many subjects concerning psychological problems, sexuality, AIDS and so on. The users are offered a web form to fill in, where the insertion of name and personal e-mail address are optional. For taking part in the chat discussions the advice seekers can use a nick name. Lifeline strongly insists on the user's acceptance of the conditions of usage and declares that lifeline doesn't give any guarantee on correctness and accuracy of the answers given in any conversation or advice seeking dialogues. According to the way they see themselves, they offer only the technical platform for enabling communication between patients and doctors. In consequence, lifeline doesn't take over any responsibility for damage and doesn't want to pay compensation if things will go wrong. There are many other online-counseling services on the internet, see also Döring (2000) for an overview and categorization of these sites.

With some exceptions mostly information, e.g. on organizations, services or subject areas of interest, is provided at web sites. Some of the exceptions to this practice are named above. These exceptions clearly indicate the new trend for online-counseling which exists in Europe. But there is an intensive discussion on the use of media for psychotherapist's practice. The new medium discussed now is the internet. Some years ago ethical questions on audio or video recordings of psychotherapist sessions were discussed. Under the media aspect, several arguments could be put forward against the kind of online-counseling described above. Some mental health experts believe that it is an inferior method because the therapist cannot witness the patient's body language, demeanor or tone of voice. So, the quality of communication will be limited and communication can fail in predictable ways, depending upon the model or stereotypes they employ (Fiske/Taylor 1991). As more and more counseling services appear, mental health professional organizations begin to consider the impacts, as well as questions concerning ethics and efficiency of psychotherapists providing services over the WWW.

As far as professionalism is concerned, one can never be absolutely sure, if the e-mail or chat conversation partner is really a professional expert in the subject field. Furthermore, what about confidentiality? Strict confidentiality for e-mail contacts has to be guaranteed by the expert providing assistance and help, as the psychotherapist can do in our project, who is motivated by his professional background and affiliation. This is important from the point of view of data security. Above this common criteria critical questions may cause severe threat for punishment which would prevent youngsters in face-to-face communication situation from openness and honesty. In order to enhance confidentiality of the communication partner, the German professional association of psychotherapists is discussing to give a certificate for those, who should be allowed to provide online counseling and online therapy.

Liability is another aspect, which cannot easily be guaranteed with online-counseling. Communication via the internet is always in danger to be stopped at any time, whenever one of the communication partners does no longer want to proceed. On

the one side this fact makes internet contact very attractive for many people. On the other side, however, there is a disadvantage connected with this freedom. As there is no reliable basis for receiving a relevant answer right in time, e.g. in the emergency case.

In our project "Ecstasy-Online" data encoding with PGP (pretty good privacy) is the first step of severe data transfer in e-mail communication. Online-counseling needs secure methods to prevent attacks and guarantee confidentiality and anonymity of communication. Therefore, adequate methods are to be developed, evaluated and adapted. However, in none of the contacts with the psychotherapist anyone encoded the e-mail messages with pgp. We suppose this is for reasons of not providing a user-friendly interface with the pgp-software. Furthermore, we consider this observation as a hint that user's mental models (Herczeg 1994) on confidentiality differ from real technical conditions for privacy on the web.

Our next step will be to enable anonymity and unobservability for communication over the internet. As every use of internet services generates data traces, which can be recorded and combined at every step taken on the transfer path (Danz et al. 1999), it bears the danger of third parties to take a look at the content. Therefore, according to technical reasons all data transfer over the internet is of limited confidentiality in the above sense. In order to guarantee a maximum of confidentiality, technical concepts like anonymity and being unobserved during communication are suggested (WAU 1999). These concepts will be implemented for application in Ecstasy-Online in cooperation with the commissioner for data protection in Schleswig-Holstein in the project WAU (web surfing anonymous and unobservable), funded by the European Commission, where a technology for anonymity on the web based on mix-techniques (Chaum 1981) is developed.

3   Aesthetics of Online-Counseling Services for the Target Group

Aesthetics is essential in order attract the target group to use the web site. Adequacy for a Web site for youngsters means to adapt verbally, in tone of voice, and visually with graphic design. This should not be done by adult people who are always in danger to adapt to their own mental models and stereotypes of young people. Authentic and user adequate design involves young people's own experiences, their way of thinking and their attitudes towards proper life-style. The graphic design of the Web pages was done by a student of design (Muthesius Hochschule, Kiel, Germany) in order to meet people's taste and life-style.
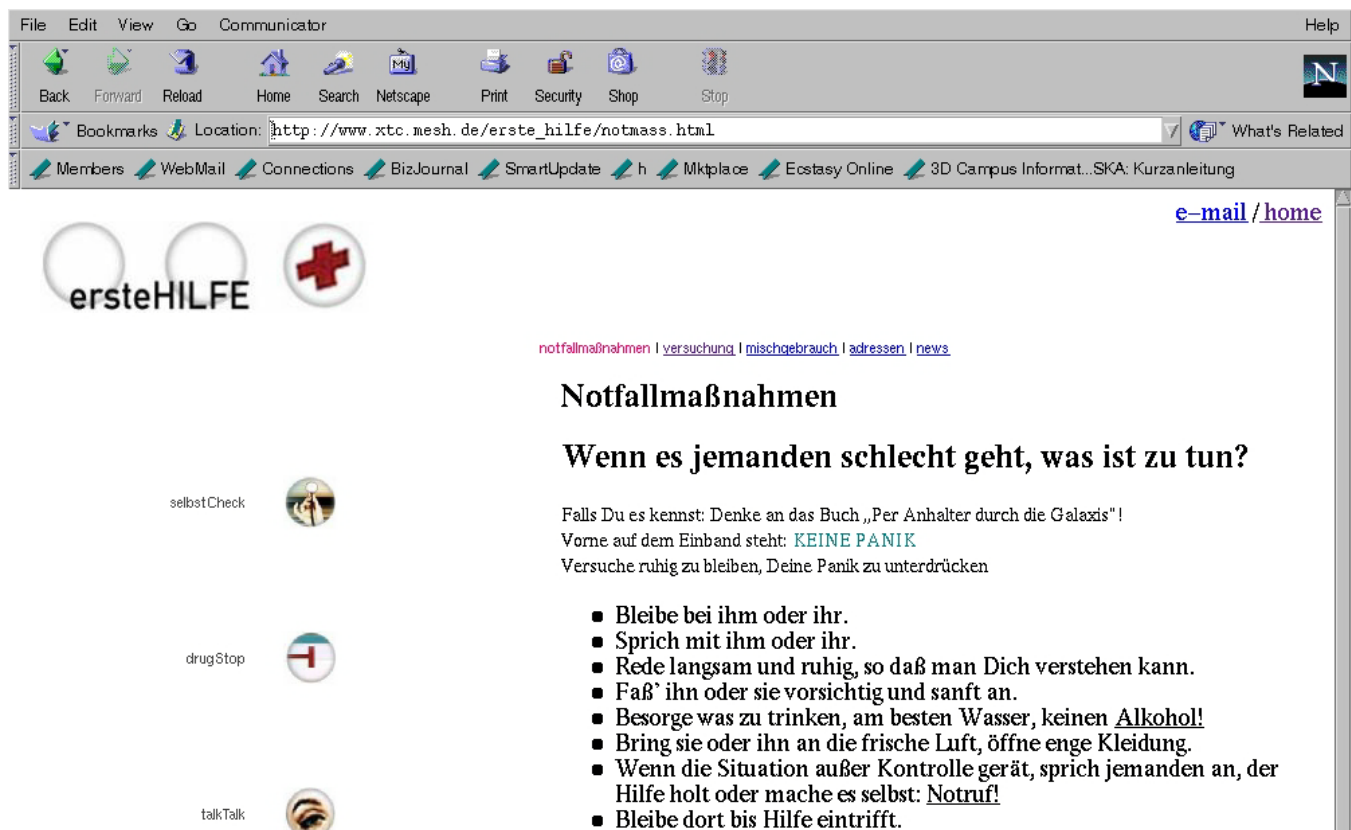

Fig 1. Screen shot from Ecstasy Online illustrating information structure

The screen shot of "Ecstasy-Online" (figure 1) shows the subject areas, for which information is provided: What to do in the case of emergency (including subjects: what to do and how to help, the effects drugs take, contact persons and so on).

There is information that will help a person to estimate the degree of her or his addiction to drugs and the risk taken by this. The subject area called "drug stop" gives background information on drugs (chemistry), hints on literature and further information on subjects of interest. In the subject area "talk talk", communication means and interviews with drug addicted people reporting experiences in drug problems are provided. The subject area "this server" informs about the persons who are responsible for the web site, about the service itself and about privacy and anonymity on the internet and what confidentiality means in the context of "Ecstasy-Online". The subject areas are divided in a way to offer the target group quick access and a mirror of their problems and questions. In order to cope with the users' mental models and expectations there are only small chunks of information on each node, mostly short texts, in order not to bore people. The information structure is clear and concise and the important facts are marked with bullets. Besides getting information from the web site, there is a possibility for email communication with a psychotherapist.

Since more than one and a half year we have some experiences in providing mental health services to young people over the internet. In the following sections some usage data are given on information demand from Ecstasy Online. Table I shows the total number of pages requested in Ecstasy-Online from October 1999 to July 2001. In the most frequented months, March 2000, July 2000, March 2001, May 2001 and June 2001, more than 10.000 pages where requested. This clearly shows that there is a continuous interest in our service, even if it is currently restricted to the narrow subject of ecstasy use and for the clearly defined target group of those young people and their peer groups (parents, friends), who are exposed to XTC addiction or are in danger of consuming this party drug.

TABLE I

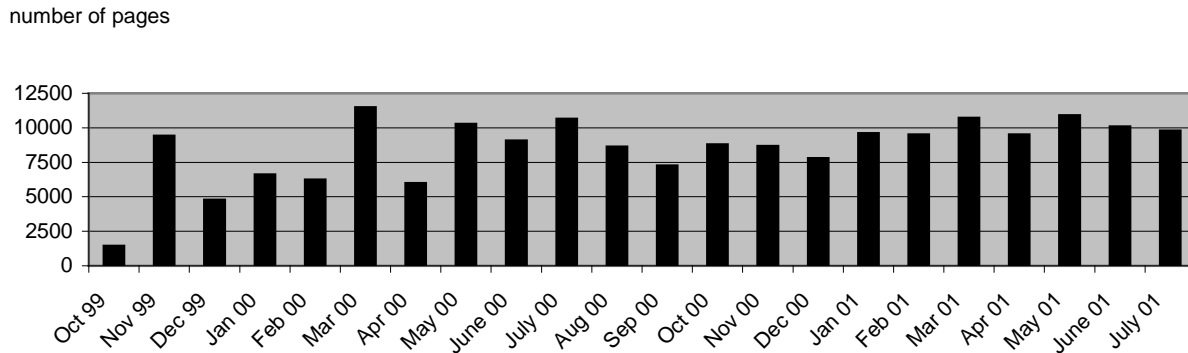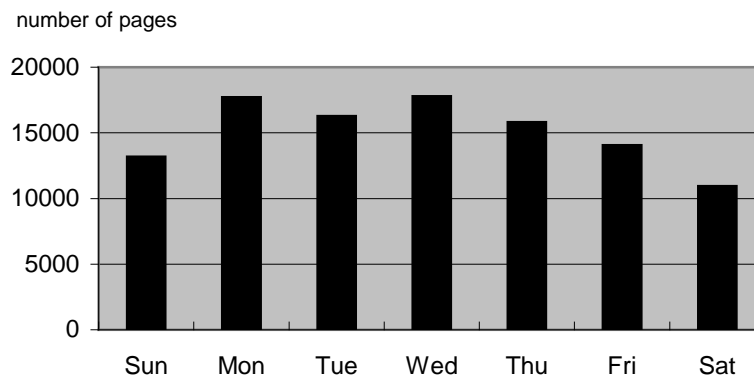NUMBER OF REQUESTED PAGES / MONTHLY SUMMARY

Table II shows a daily summary of the number of requested web pages in Ecstasy-Online. We see that information is demanded all over the week. Information are demanded nearly equally on week-days, less demand is during the weekend.

TABLE II

NUMBER OF REQUESTED PAGES / DAILY SUMMARY (OCT 99-JULY 01)

Similarily, the hourly summary on requested web pages, given in table III, shows that information on demand is needed. Although there are peaks in the early afternoon (1 p.m. to 3 p.m.), there is also considerable demand in the evening hours and

also during the night. Therefore, this statistics as well as the statistics summarizing the weekly demand show that availability of information-on-demand seems to be an important need of this user group.

TABLE III

NUMBER OF REQUESTED PAGES / HOURLY SUMMARY (OCT 99-JULY 01)

number of pages
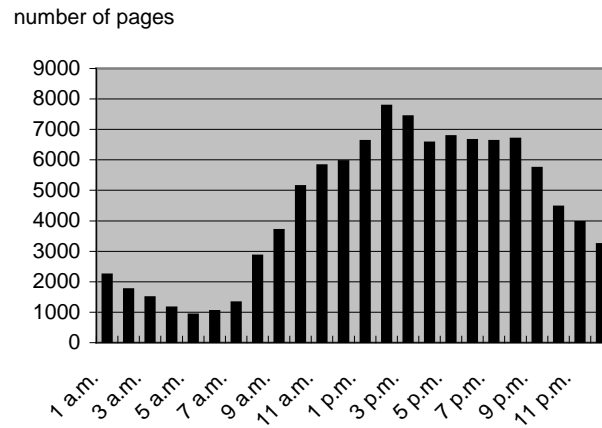
4 On the Actual Discussion on Anonymous and Unobservable Internet Use

Online-Counseling as discussed above is one example for the citizens needs on anonymous and unobservable communication on the Internet. The subject is on discussion, since the possibility of blanket coverage of peoples` behaviors have been enlarged by the internet. In consequence the discussion on privacy protection, anonymity and unobservable use of the internet was intensified. To keep data of surfers confidential, however, is a nightmare scenario for example for customer profiling in e-commerce. Being anonymous and unobserved on the internet is intensively discussed by politicians in the context of cyber crime and therefore subject to legislation in several countries (Excerpt 2000; Schulzki-Haddouti 2000). The government of the Netherlands proposed to make the right on confidence in communication part of civil rights (Van Buuren 2001).

However, the question if anonymous internet use should become a civil right or not is controversially discussed in European countries (Krempl 2000). Since last year there is also a legislation draft of the European Council against cyber crime (Registratiekamer 2001; Vorschlag 2000). This legislation initiative foresees in article 6 that all internet providers have either to delete or to make anonymous all transfer data. On the other side there is a document of the European Working Group for Collaboration of the Police which states that several delegations (from Belgium, Denmark, France, the Netherlands, Sweden and Great Britain) see this with the reservation that the Commission would prevent access to data, which could be relevant to combating crime (Statewatch 2001). Another proposal for data collection of individual internet data transfer was put forward by the USA at the G-8-Conference (Lischka 2000), defining a kind of international internet police. Although this proposal was refused by "Internet Alliance" and by "Global Internet Project" it reveals international legislation's interest in stricter regulation and control for the communication and internet data transfer. According to their concept only digital signature should be allowed, but not the kind of anonymity needed for example for the kind of personal service offered in our project on XTC. However, in situations like mental health services for young people, there is absolutely no need for anyone to be able to reveal the identity of the communication partner or to get knowledge of sensitive personal data. In such cases it is obvious that freedom of communication needs adequate technology like the mix-concept which has to be implemented and cannot be negotiated among the communication partners (Pressemitteilung LD 08.11.1999).

5 Outlook

The intense discussion on anonymity seems to neglect some aspects of communication freedom of some user groups of the citizens. In the context of freedom of communication it resembles a war on civil rights. If we relate this discussion to the history of media and if we try to understand it from this larger perspective, we want to argue with McLuhan that people always try to bring new media under control with respect to their functions and applications (cf. McLuhan 1995). However, the hybrid nature of crossing media and the resulting interactions have an explosive nature and effect on society. At the same time these effects and interactions give people a chance to recognize the new medium's real structure and potential to use it more adequate to the nature of the new medium. One aspect of the Internet is the potential of collecting detailed information

on the user. The degree of publicity of this kind of public life is greater than it could ever be on public places of our cities. From this point of view the message of the medium is a change in our communication rules, which we should severely think over. From a media theoretic point of view anonymity in our communication on the Internet, as described in the context above, offers a chance to explore the real nature of the medium. It may bring us one step closer to a real understanding of the new medium.

References

Baur, E.G. (1999): Online-Therapie: Die Sitzung mit der Maus. Sonntagszeitung vom 13. Juni 1999

Chaum, David (1981): Untraceable Electronic Mail, Return Addresses, and Digital Pseudonyms. Communications of the ACM 24 (2), S. 84-88

Danz, U.; Federrath, H.; Köhntopp, M.; Kritzenberger, H.; Ruhl, U. (1999): Anonymer und unbeobachtbarer Webzugriff für die Praxis; IT-Sicherheit ohne Grenzen. Tagungsband 6. Deutscher IT-Sicherheitskongreß des BSI, 17.-19. Mai 1999 Bonn: Bundesamt für Sicherheit in der Informationstechnik. Ingelheim: SecuMedia-Verlag, S. 59-70

Döring, Nicola (2000): Selbsthilfe, Beratung und Therapie im Internet. In: Batinic, Bernad (Hg.): Internet für Psychologen. 2., überarbeitete und erweiterte Auflage, Göttingen: Hogrefe, S. 509-547

„Ecstasy-Online"-Drogenberatung im Internet, Medizinische Universität zu Lübeck, URL: http://www.xtc.mesh.de

Eichenberg, Christiane (1999): Die virtuelle Couch. Selbsthilfe, Beratung und Therapie im Internet. In: c't 1999, Heft 5, S. 204ff

Excerpt from the French Legislation Draft on Anonymity on the Internet (2000). URL: http://altern.org/defense/vote/texte.html

Fiske, S.T., Taylor, S.E. (1991): Social Cognition. 2nd edition. New York: MacGraw Hill

Herczeg, M. (1994): Software-Ergonomie. Addisson-Wesley-Longman and Oldenbourg-Verlag

Kritzenberger, Huberta.; Ruhl, Uwe; Herczeg, Michael (2000): Utilizing the New Media to Provide Mental Health Services to Young People. In: Proceedings of ISTAS 2000. IEEE International Symposium on Technology and Society, Rome 6th-8th September 2000, pp.

Lischka, Konrad (19.05.2000): Wer hat Angst vor der Cyber-Polizei? URL: http://www.heise.de/bin/tp/issue/dl-artikel.cgi?artikelnr=8171& mode=html

McLuhan, Marshall (1995): Die magischen Kanäle. Understanding Media. 2., erweiterte Auflage. Dresden, Basel: Verlag der Kunst

Nutzung von Online-Medien in Deutschland. ARD/ZDF-Online-Studie 1999: Wird Online Alltagsmedium? Media Perspectiven 8, S. 401-414

[Pressemitteilung LD 08.11.1999] Pressemitteilung des Landesbeauftragten für den Datenschutz Schleswig-Holstein: „Ecstasy-Online" braucht datenschutzrechtliche Garantien, 08.11.1999, URL: http://www.rewi.hu-berlin.de/Datenschutz/DSB/SH/material/themen/presse/ecstaspm.htm

Registratiekamer (2001): The European Data Protection Authorities publish their policy concerning on-line data protection URL: http://www.registratiekamer.nl/bis/top-1-11.html

Schulzki-Haddouti, Ch. (2000): Anonymität im Netz bald nicht mehr erlaubt? SPIEGEL ONLINE, 17. Mai 2000 URL: http://www.spielgel.de/druckversion/0,1588,76715,00.html

Statewatch (August 2001): Monitoring the State and Civil Liberties in the European Union. URL: http://www.statewatch.org

Stefan Krempl (2000): Anonymität im Internet ist kein Grundrecht. Ein Interview mit Bundesinnenminister Otto Schily c't 19/2000, S. 36: Online available at: http://www.heise.de/newsticker/data/jk-08.09.00-005

Jelle van Burren (21.3.2001): Hitzige Diskussion um Verkehrsdaten. URL: http://www.heise.de/bin/tp/issue/dl-artikel.cgi?artikelnr=7186&rub_ordner=inhalt&mode=html

Vorschlag für eine Richtlinie des Europäischen Parlaments und des Rates über die Verabeitung personenbezogener Daten und den Schutz der Privatsphäre in der elektronischen Kommunikation. 2000. URL: http://europe.eu.int/eur-lex/de/com/dat/2000/de_500PC0385.html

WAU – Webzugriff anonym und unbeobachtbar. 1. Zwischenbericht „Anonyme Internet-Nutzung". 1. November 1999. Projekt des Landesbeauftragten für den Datenschutz Schleswig-Holstein, gefördert von der Initiative Informationsgesellschaft Schleswig-Holstein, URL: http://www.rewi.hu-berlin.de/Datenschutz/DSB/SH/projekte/wau/index.htm