Methods and resources to monitor Internet censorship

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Abstract

Purpose – The purpose of this paper is to raise awareness of the importance for library and information services (LIS) to take the responsibility to find a manageable way to regularly monitor Internet censorship in their countries, to suggest a framework for such monitoring and to encourage manageable on-going small scale research projects.

Design/methodology/approach – The paper follows on contract research for the IFLA Committee on Freedom of Access to Information and Freedom of Expression (FAIFE) on country-specific trends in Internet censorship. Based on an extensive literature survey (not fully reflected here) and data mining, a framework is suggested for regular monitoring of country-specific negative and positive trends in Internet censorship. The framework addresses search strategies and information resources; setting up alerting services; noting resources for data mining; a detailed break-down and systematic monitoring of negative and positive trends; the need for reflection on implications, assessment of need(s) for concern (or not), and generation of suggestions for actions; sharing findings with the LIS community and wider society; and raising sensitivity for Internet censorship as well as advocacy and lobbying against Internet censorship. Apart from monitoring Internet censorship, the framework is intended to encourage manageable on-going small scale research.

Findings – A framework of Internet censorship monitoring can support the regular, systematic and comprehensive monitoring of known as well as emerging negative and positive trends in a country, and can promote timely expressions of concerns and appropriate actions by LIS. It can support sensitivity to the dangers of Internet censorship and raise LIS' levels of self-efficacy in dealing with Internet censorship and doing manageable, small scale research in this regard.

Originality/value – Although a number of publications have appeared on Internet censorship these do not offer a framework for monitoring Internet censorship and encouraging manageable on-going small scale research in this regard.

Keywords – Libraries, information services, Internet censorship, monitoring

1   INTRODUCTION

Concern about traditional censorship is nothing new (Malley, 1990; Oboler, 1980). Censorship is, however, no longer limited to print media and videos. Internet censorship, also referred to as electronic censorship (e-censorship), cyber or Net censorship, has been

noted with growing concern since the advent of the Internet (Ang and Nadarajan, 1996; Byfield, 2011; Clyde, 1997; Stuart, 2002) – partially due to all the things that people are deprived of if there are restrictions on their use of the Internet, communication facilities, etc. This includes access to information on a global scale, opportunities for learning and education, as well as informed-decision making and empowerment.

The purpose of this paper is to raise awareness of the importance for library and information services (LIS) to take the responsibility to find a manageable way to regularly monitor Internet censorship in their countries. Concerns about Internet censorship and its impact on people are widely noted and will be discussed as background to the need for on-going and regular monitoring of Internet censorship. Since this can be a time-consuming and tedious process, especially to note incidents that do not feature prominently in mass media, the paper proposes a framework for regular monitoring to streamline the process. The paper thus addresses the following:
- Search strategies
- Importance of literature reviews and alerting services
- Systematic data mining
- Systematic recording of negative and positive trends
- Reflection, assessment of needs for concern and suggestions for actions
- Libraries raising sensitivity for Internet censorship as well as advocacy and lobbying against Internet censorship
- A framework for monitoring Internet censorship that could lead to on-going small scale research

2 BACKGROUND

The Internet conveys copious prospects for people on a global scale to access all kinds of information and to raise levels of knowledge, decision-making, education, and empowerment of citizens from all levels of society and in all contexts including politics, religion, health, education, and social interaction (Warf, 2011). Internet censorship can deprive people from these important aspects, and it is argued that with Internet censorship free and open access to information on the Internet is at risk which is a great concern for the open scholarship movement (Burnett and Feamster, 2013). Therefore various advocacy groups and annual reports on e-censorship try to raise sensitivity for censorship and the impact on society e.g. the Paris-based Reporters Without Borders, the Electronic Frontier Foundation and the Washington DC-based Freedom House (Al-Saqaf, 2010) as well as the IFLA World Report (Bothma, 2010a and b), and the IFLA FAIFE reports (Bitso, Fourie and Bothma, 2012; Dick, Oyieke and Bothma, 2012). *Access Denied the Practice and Policy of Global Internet Filtering (*Deibert *et al*., 2008)*, Access Controlled the Shaping of Power, Rights, and Rule in Cyberspace (*Deibert *et al*., 2010) and *Access Contested Security, Identity; and Resistance in Asian Cyberspace (*Deibert *et al.,* 2012) also outline excellent summaries of countries based on research done by OpenNet Initiative.

Internet censorship manifests in many forms such as the blocking of access to websites and social media as well as surveillance affecting a variety of resources such as websites, email and social networking (Bitso, Fourie and Bothma, 2012; Dick, 2012). It can be pervasive or implied. Although there are many barriers to Internet access that can be interpreted as implied forms of Internet censorship such as lack of access to computers and the Internet, payment for access, and lack of education and skills in using the Internet, this paper will focus only on explicit Internet censorship, and more specifically the role of the state and the role of Internet companies and search engine providers. Although Internet companies and search engine providers may seem to be in positions where they have more power, their involvement are often due to pressure from states to participate in Internet censorship. Governments use legal frameworks to enforce censorship (Deibert *et al*., 2008), and some

impose mandatory requirements on Internet service providers to prevent their subscribers from accessing overseas content that would be banned locally or they expect search engines to filter search result that contain certain words such as "free Tibet" or to block access to certain websites (Anderson, 2007; Bitso, Fourie & Bothma, 2012; OpenNet Initiative, 2004).

2.1   Role of the state in Internet censorship

States or governments tend to inculcate their traditional restrictions to the Internet based on their historical, cultural, political, religious, constitutional, and moral values (Akdeniz and Altiparmak, 2008). Traditional as well as Internet censorship enforced by states have often been met with concerns (Al-Saqaf, 2010; Burnett and Feamster, 2013; Cohen, 1997; Dawkins, 2011; Depken II, 2006; Munro, 1979:4; Robotham and Shields, 1982:58; Wagner, 2012; Zuchora-Walske, 2010).

Internet censorship can also be enforced by other bodies related to the state such as public libraries (Brown and McMenemy, 2013; Jaeger and Yan, 2009; Thompson, 1975), school libraries (Oboler, 1980), and in the mass media (Duncan, 2012).

Censorship is occurring in various countries at varying levels. Some countries such as China and Myanmar have reputations for rigorous Internet censorship directed by political or ideological foci, while it is less obvious and sometimes somewhat disguised in democratic countries such as Finland and Australia with a strong focus on pornography (Bitso, Fourie and Bothma, 2012; Calingaert, 2010; Feng and Guo, 2013; Wagner, 2012; Warf, 2011). The United Kingdom and the United States are especially noted for concerns about the impact of their surveillance policies (Bitso, Fourie and Bothma, 2012). Censored content varies widely based on country, culture and context, and may range from political opposition to child pornography, gambling and dissident content (Al-Saqaf, 2010). Gorman (2005) reports on censorship in China, Ang and Nadarajan (1996) on Singapore, Goth (2009) on Iran, Bambauer (2009) on Australia, Wang (2003) on the United States of America, and Editors of Public Library Quarterly (2008) on Internet café censorship in South Korea. More comprehensive country-based censorship is revealed in studies by OpenNet Initiative Research reports which includes the books: *Access denied: the Practice and Policy of Global Internet Filtering* (Deibert *et al.*, 2008), *Access Controlled: the Shaping of Power, Rights, and Rule in Cyberspace* (Deibert *et al.*, 2010) and *Access Contested: Security, Identity; and Resistance in Asian Cyberspace* (Deibert *et al.*, 2012) that give a picture of global censorship. An informative study at global level covering various countries was also reported by Electronic Frontiers Australia (2002).

Dimensions of Internet censorship include distributed denial-of-service (DDoS) attacks, surveillance at key points of the Internet's infrastructure, take-down notices, stringent terms of usage policies, and national information shaping strategies (Deibert *et al.*, 2010). Measures of control also include Internet curfews (i.e. the Internet is down for a few hours) and Internet blackouts (i.e. when there is no Internet access for up to several days) (Bitso, Fourie and Bothma, 2012). More recently a study by Warf (2011) offers a comprehensive review of Internet censorship, while trends in selected countries are reported in some detail by Bitso, Fourie and Bothma (2012) and Dick, Oyieke and Bothma (2012).

2.2   Internet companies and search engine providers

There is evidence that Internet companies such as Google, Yahoo, Microsoft and Cisco are assisting states such as China with Internet censorship (BBC, 2013; Bitso, Fourie and Bothma, 2012; Cohen and York, 2011; Dann and Haddow, 2007; Dewey, 2013; en.greatfire.org, 2013; Miller, 2013). Bitso, Fourie and Bothma (2012) also report on the monitoring of email through search engines such as Yahoomail, Gmail, and government

requirements for Internet cafés and Internet service providers to report on their customers' details and Internet use. MaKinnon (2009) also report on the involvement of companies and search engines in Internet censorship in China.

The publications noted in Section 2 and more specifically reports by IFLA-FAIFE (Bothma, 2007, as well as earlier reports in this series (http://www.ifla.org/publications/iflafaife-world-report-series)), the IFLA World Report (Bothma, 2010a), Bitso, Fourie and Bothma (2012) and Dick, Oyieke and Bothma (2012) should alert libraries and information services, and especially national libraries, from all countries of the need to acknowledge a responsibility to regularly monitor for incidents of Internet censorship in their countries. Although websites such as Amnesty International, Electronic Frontiers Australia, Freedom House, Human Rights Watch, Index on Censorship, OpenNet Initiative and Reporters Without Borders offer excellent surveillance data, their findings need to be supplemented on an on-going basis to note changes in countries, and especially new forms of Internet censorship and surveillance, as well as tools and means to counter Internet censorship (e.g. circumvention software, web proxy software). From the literature it seems as if libraries and information services are mostly focused on their role and the ethical implications in monitoring how their patrons use the Internet (Wyatt, 2006) and filtering in libraries (Brown and McMenemy, 2013). This should change to a more proactive role – as reflected in the following sections.

3   SEARCH STRATEGIES

A search strategy includes the search terms, combination of search terms and the selection of information resources to be searched. Literature searches can reflect the status quo of reports on a specific country and can help with the identification of censorship trends to monitor, as well as with the identification of search terms for trends or censorship practices. Library and Information Science Abstracts (LISA), Library, Information Science and Technology Abstracts (LISTA), ISI Web of Science, Scopus, ScienceDirect, Emerald, and ACM Digital Library are useful databases for searching. In addition library catalogues and online book services such as Amazon.com and Book Depository are useful information resources to identify book titles on Internet censorship such as *Internet Censorship: Protecting Citizens Or Trampling Freedom*?; *Community, Space and Online Censorship: Regulating Pornotopia*; *A Guide to Internet Censorship: An Overview, Circumvention, Censorship Around the World*.

Not all useful information sources will, however, be picked up in this way. Personal recommendation and manual searching of lists of references of reported literature is necessary to identify key books on Internet censorship such as those that were mentioned earlier. Blogs reporting or discussing incidents of Internet censorship are also growing; a few examples are: http://www.renesys.com/blog/; http://www.economist.com/blogs/ and http://advocacy.globalvoicesonline.org. Consequently blogs should be considered when searching information pertaining to Internet censorship. Google Blogs is quite useful for searching for blogs. In addition, Google Transparency Report presents data and information on the removal of content requests on Google from governments world-wide.

Keywords that can be used as search terms include e-censorship, cyber censorship, Net censorship and Internet censorship, combined with the name of a country. Once trends, incidents, and methods of restrictions and enforcement have been identified these can be combined with the country name to further expand search strategies. Examples of such search terms and phrases include "deep packet inspection", "control at cybercafés", "monitoring software", "web-filtering software", "email interceptions", "website blocking", "denial-of-service", "Internet privacy", "circumvention software" and "web proxy software".

4   IMPORTANCE OF LITERATURE REVIEWS AND ALERTING SERVICES

A review by Bitso, Fourie and Bothma (2012) revealed that there is a considerable difference between the number of publications on Internet censorship appearing in the early years of the Internet and more recent publications (2008-2011) with early days' output being more prolific. More recently, 2012-2013, literature focuses more on political determinants of Internet censorship (Meserve and Pemstein, 2012), and on approaches to content restriction (Oh and Aukerman, 2013), circumvention technology (Maitland, Thomas III and Tchouakea, 2012) and also the filtering products for censorship (Dalek *et al.*, 2013). The literature also focuses on a number of countries; countries known for stringent Internet censorship features more frequently such as China (Dong, 2012; Feng and Guo, 2013), Vietnam, and Pakistan (Nabi, 2013).

The situation in a country may change at any time, and sometimes incidents of censorship may go unnoticed if not monitored. Bitso, Fourie and Bothma (2012) e.g. noted that the list of websites blocked in Finland is not publicly available and even websites speaking out against the blocking of pornography have been blocked. In Australia the blocking of websites on euthanasia has been reported. Apart from once-off literature reviews regular monitoring through the use of alerting services e.g. as search profiles against databases such as the databases searched in preparation of this article, as well as search engine alerts e.g. Google Alert (http://www.google.com/alerts), Yahoo Alert (http://alerts.yahoo.com/) and Giga Alert (http://www.gigaalert.com/) is thus necessary.

The use of alerting services, also referred to as current awareness services, have been discussed over many years by library and information services (Kemp, 1979). More recently Fourie (2003, 2006) explores the use of these for librarians. Alerting services aimed at Internet censorship should cover the following:
- Saved search strategies on databases relevant to Library and Information Science (e.g. LISA).
- Saved search strategies on local databases covering local books and journals, as well as newspaper clippings.
- Saved search strategies on global as well as local search engines.
- Search terms relevant to Internet censorship as well as trends (e.g. Halaal Internet censorship), means and tools for monitoring, as well as for countering Internet censorship such as the use of Herdict (Anonymous, 2009) that encourages Internet users to report blocked websites.

Personal information management using free software such as Mendeley can add further value in recording references, publications and ideas (Fourie, 2011).

This needs to be supplemented by systematic data mining.

5   SYSTEMATIC DATA MINING

Although literature reviews are important in revealing trends, search terms and resources to consider, the Internet is the main resource to monitor country-specific incidents of Internet censorship and expressions of concern on what is happening in a country. The OpenNet Initiative maintains an annually updated list in which countries are categorised as "enemies of the Internet". Bitso, Fourie and Bothma (2012) used systematic data mining, according to the following categories of information resources to report on trends in selected countries:
- meta sites and directories
- search tools specialising in news such as news search engines, conventional search engines specialising in news, news services, news hubs and newspapers
- expert monitoring sites. (More detail is provided in Appendix A.)

Not all web information resources used for mining are of equal value, websites can be down, and there may be considerable duplication or irrelevant information. It is, however, worthwhile to cast a wide net and to work through a number of pages for each web resource searched. The study by Bitso, Fourie and Bothma (2012) followed a basic, pragmatic approach to data mining. Future work, however, need to refine the strategies followed in line with practices reported on other projects using data mining such as Pan (2013) on service satisfaction in the tourism industry, Chen and Liu (2004) on the value of data mining to Information Science and Kovacevic, Devedzic and Pocajt (2010) on the improvement of digital library services. Problematic issues noted were the impact of geographic context sensitivity and the difficulty in verifying reported incidents of Internet censorship. Fourie, Bitso and Bothma (2012) dealt with the latter by reporting the source for noting the incident. Many incidents may, however, go unnoticed depending on the spectrum of sources used for data mining.

5.1   Geographic context sensitivity when searching

Search engines such as Google try to increase the relevance of search results (*inter alia*) based on "the country of origin of the user and the country-specific version of Google" (Bergenholtz and Bothma, 2011:56). One example (tests performed in November 2013) will suffice. "EFF" is an abbreviation which can refer to many entities, *inter alia* the *Electronic Frontier Foundation* (http:www.eff.org) and the *Economic Freedom Fighters,* a new political party in South Africa (*www.economicfreedomfighters.org*). Searching for the abbreviation "EFF" on Google results in around 59 million hits on the South Africa (.co.za) version of Google, as opposed to about 61.6 million hits on some of the European versions, such as the Dutch (.nl), Danish (.dk), Spanish (.es), French (.fr) and German (.de) versions. This difference in numbers, in itself, is not significant. However, what is relevant is that the first page(s) of results of South African and European versions of Google list different hits. On the South African version of Google, the first eight retrieved items refer to the *Economic Freedom Fighters* (in addition to an advertisement at the top of the page), the next three to *Electronic Frontier Foundation* and the following 13 items again to the *Economic Freedom Fighters*. On the European sites, however, the first number of references is invariably to the *Electronic Frontier Foundation,* typically followed by a link to the disambiguation page in the English version of Wikipedia (http://en.wikipedia.org/wiki/EFF), with the *Economic Freedom Fighters* only appearing considerably lower down. The implication therefore is that Google assumes that South Africans will predominantly be interested in the South African political party and people in Europe not, i.e. that "a user from South Africa would find results from websites in South Africa on average more relevant than websites from, say, Denmark or Spain" (Bergenholtz and Bothma, 2011:56). In addition, the South African version of Google offers multiple language interfaces for Google, *inter alia* English, Afrikaans and seSotho. Interestingly the results for these three interfaces also differ: in the Afrikaans and English versions, the first results are fairly similar (but not identical), but in the seSotho version, the first link is to the *Electronic Frontier Foundation* website followed by a totally differently ordered set of links to the political party, the *Electronic Frontier Foundation* and various other interpretations of the abbreviation. A language-specific search for Afrikaans articles only on EFF reveals that there are many articles written in Afrikaans; the first Afrikaans article with the Afrikaans interface, however, only appears as reference twelve, the second as reference 21 and no further Afrikaans article appears under the first 100 hits. Different language interfaces of Google.co.za therefore offer different results to the user, but these results are not oriented to language-specific results.

From this simple example, it is evident that a Google search does not always present the same results to the user. The results can differ substantially based on the version of Google used and, in the South African situation, even on the language interface chosen. (This would also apply to other countries where searching in multiple languages are supported e.g. www.google.be for Belgium.) Users of Google are typically not aware of this and they should

be made aware of the fact that Google varies the results based on what the search engine perceives as the possible relevance for the user. Google therefore makes assumptions about its users that may not necessarily be valid and may skew the information presented to the users.

6 SYSTEMATIC RECORDING OF TRENDS AND REFLECTION ON IMPLICATIONS

Bitso, Fourie and Bothma (2012) identified eight main negative trends and four positive trends to be monitored. More need to be added. For each trend finer detail is noted in Appendix B. The intention with Appendix B is to show how reported incidents can systematically be noted to build a profile of Internet censorship in a country. (Based on alerting services noted earlier, trends can be added as noted.)

Trends in actions and methods of censorship as well as increases in incidents of censorship are considered as negative trends. These include
- Violations of Internet related privacy such as e-mail interceptions, the need to register with an Internet Service Provider (ISP), control at cybercafés, policing of e-mail and other electronic messages, outsourcing of censorship, inadequate protection of the right to privacy, inadequate data protection and enforcement by legislation.
- Blocking of access to Internet content including the use of web-filtering software, topics typically blocked, and the blocking of specific Internet resources such as Facebook or other social media.
- Ubiquitous society and control including the outsourcing of censorship and surveillance.
- Censorship of Internet related media including the media affected, means of censorship, user rating and Halaal Internet.
- Criminalisation of legitimate expression including the closing of websites, shutdown of online social networks, actions against journalists, bloggers, regulation and legislation, and enforcement of legislation.
- Control of website creation and registration.
- Support for Internet censorship (not legally or government enforced).
- Enforcing regulations and Internet censorship.

Trends in countering censorship and opposing censorship are considered positive trends. These include:
- Changes in groups, group dynamics, responses and actions of groups such as gaining access to censored content and avoiding government blocks on blog posts.
- Side-stepping e-censorship.
- Cyber actions against Internet censorship.
- Ways of showing opposition to Internet censorship, e.g. TUMBLR.

The table in Appendix B presents a systematic way of recording findings based on positive and negative trends as noted by Bitso, Fourie and Bothma (2012). These should be supplemented as new trends and details are noted.

Merely reporting trends is not sufficient; it needs to be supplemented by reflection on the implication of each trend, its potential impact, and needs for concern. Furthermore, steps need to be initiated to generate ideas on solutions. For the latter, a good idea would be to go back to the literature and read on initiatives by other countries (Bitso, Fourie and Bothma, 2012; Burnett and Feamster, 2013). The study by Al-Saqaf (2010) also report on means to counteract Internet censorship.

7 FRAMEWORK FOR MANAGEBALE REGULAR MONITORING AND SMALL SCALE RESEARCH

Considering Internet censorship and the impact thereof especially on the Open Access movement, Burnett and Feamster (2013) raise crucial arguments that Internet users need an independent, third-party service that helps them determine whether their Internet service provider is restricting access to content or specific protocols. Moreover, citizens need a system that continually monitors the extent of censorship and manipulation in countries around the world; they should be in a position to evaluate the efficacy of various technologies that attempt to circumvent censorship in real-world settings. In view of these arguments, the authors draw from Fourie and Bakker (2013) who suggest a manageable research life cycle for small scale research by library and information service practitioners, which might eventually develop into action research. Although their model was developed from oncological contexts and cancer library services, it can be considered for adaptation for the purposes of monitoring Internet censorship after an empirical verification. The adapted model is presented in figure 1. It suggests:

- A review of the subject literature to reveal terminology, trends and also sources that can be searched. New terminology e.g. on means to enforce Internet censorship or countering methods need to be recorded.
- Setting up alerts to monitor databases and searches for new trends as well as reported incidents.
- Compiling a list of Internet sources for data mining. With each round of monitoring lists need to be revised and supplemented; countries might also share such lists.
- Systematically recording incidents of Internet censorship.
- Reflection on implications, reasons for concern and suggestions for further actions.
- Sharing findings with the LIS community and wider society. This can be aligned with the need for advocacy and lobbying against Internet censorship and for the role of libraries and information services. The literature on advocacy and lobbying regarding Internet censorship needs to be expanded. Dankowski (2013) explains how social media can be used in promoting advocacy; this line of action might also work for advocacy against Internet censorship.
- Raising sensitivity in the LIS community for Internet censorship, and the need for advocacy and lobbying.

If repeated at regular intervals e.g. annually or bi-annually and if aligned with efforts to consider the value of the methods used, advocacy or lobbying or other initiatives initiated, this might lead to a series of regular manageable, small scale research projects.
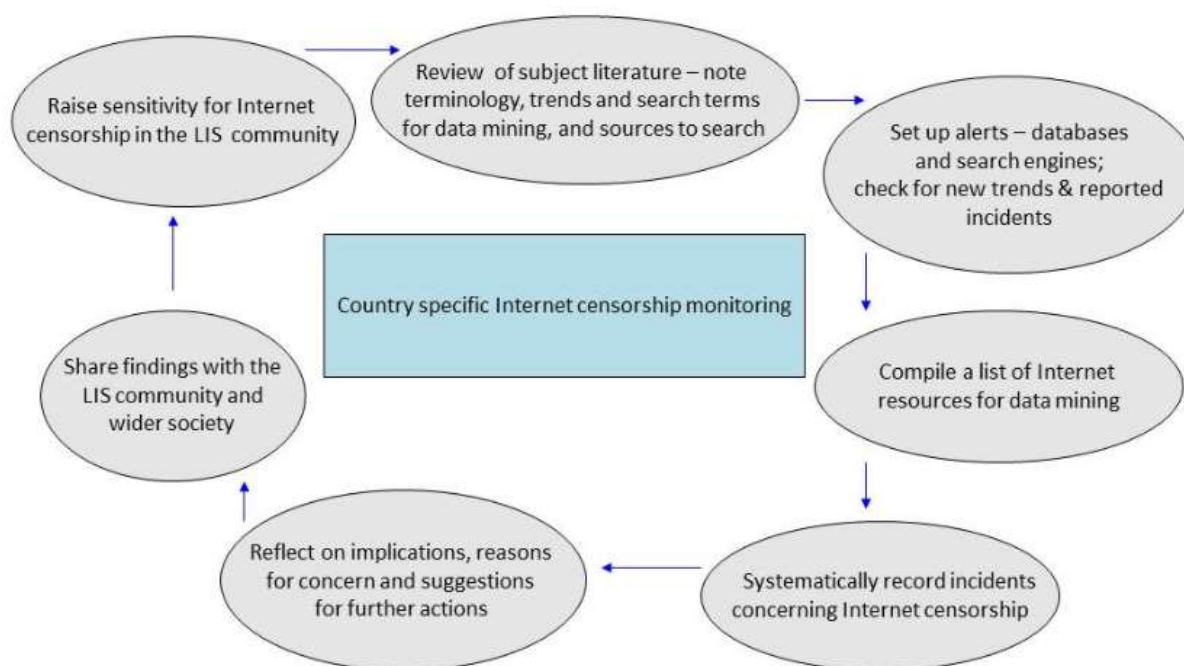
Figure 1: Manageable cycle for monitoring Internet censorship

8 CONCLUSION

Internet censorship holds serious implications for society. In some countries it is extremely stringent in terms of blocking and preventing access, and in others surveillance methods in monitoring communication and access to resources, and the type of resources blocked (e.g. euthanasia) raise concern. Country-specific tolerance for allowing the public to express concerns is also important. Libraries and information services serve the purpose of providing access to information and supporting freedom of speech. Without systematic and regular monitoring, gradual changes in negative trends in Internet censorship can easily go unnoticed and opportunities for timely action missed. Changes in positive trends, and opportunities to promote a positive image of the country in terms of freedom of access to information might also be missed.

The intention of this article was to raise awareness of the importance for library and information services (LIS) to take responsibility to find a manageable way to regularly monitor Internet censorship in their countries and to contribute to awareness of what is happening in their countries, to note success stories of counter-acting Internet censorship, and to work on advocacy and lobbying against Internet censorship. To make this task less time-consuming, tedious and daunting, the article proposes a framework for regular monitoring to streamline the process. It addresses the following: search strategies; the importance of literature reviews and alerting services; systematic data mining; systematic recording of negative and positive trends; reflection, assessment of needs for concern and suggestions for actions; raising sensitivity for advocacy and lobbying against Internet censorship. All of these can result in on-going small scale research projects e.g. on the methods used, improving advocacy and lobbying or assessing the impact of counter actions and initiatives.

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APPENDIX A: RESOURCES FOR DATA MINING

(1) Meta sites & directories

Beaucoup!	http://www.beaucoup.com
Browsys.com	http://www.browsys.com
IPL2	http://ipl2.org
The WWW Virtual Library	http://vlib.org
Yahoo directory (Internet censorship)	http://dir.yahoo.com/

(2) Search tools specialising in news such as news search engines, conventional search engines specialising in news, news services, news hubs and newspapers

Association for Progressive Communications	http://www.apc.org
BBC News	http://www.bbc.co.uk
CNN	http://edition.cnn.com/
Daily Earth	http://dailyearth.com
Global Internet Freedom Consortium	http://www.internetfreedom.org
Google news	http://news.google.com http://news.google.com/archivesearch
Guardian	http://www.theguardian.com/technology (search for Internet censorship_
Headline Spot	http://www.headlinespot.com/
News Now	http://newsnow.co.uk
Newstrawler	http://www.newstrawler.com
Orange News	http://web.orange.co.uk/p/news/home
Platform for Internet Content Selection (PICS)	http://www.w3.org/PICS/
Sky News	http://news.sky.com/skynews/
WorldNews	http://www.wn.com
Yahoo! News	http://news.search.yahoo.com/news

(3) Expert monitoring sites

ALA	http://lists.ala.org/sympa/arc/ifaction http://lists.ala.org/sympa/arc/ifforum
Amnesty International	http://www.amnesty.org/
The World Fact Book - CIA	https://www.cia.gov/library/publications/the-world-factbook/index.html
Citizens Internet Empowerment Coalition	http://www.ciec.org
American Civil Liberties Union (*ACLU*)	http://www.acla.org/free-speech/internet.censorship; https://www.aclu.org/
Electronic Frontiers Australia	http://www.efa.org.au
Digital Rights in Europe	http://www.edri.org/
FAIFE Discussion list	http://infoserv.inist.fr/wwsympa.fcgi/arc/faife-l
Oxford Internet Institute - *Research* - *Projects* - The Fifth Estate	http://www.oii.ox.ac.uk/research/projects/?id=57
Freedom House	http://www.freedomhouse.org
Human Rights Watch	http://www.hrw.org/
IFEX	http://www.ifex.org/
Index on Censorship	http://www.indexoncensorship.org/
Internet World Stats	http://www.internetworldstats.com
OpenNet Initiative Country Profiles	http://opennet.net/research/profiles/
Reporters Without Borders	http://en.rsf.org/
Transparency International	http://www.transparency.org/
UNESCO Division for Freedom of Expression, Democracy and Peace	http://www.unesco.org/new/en/communication-and-information/freedom-of-expression/
World Summit on the Information Society	http://www.itu.int/wsis/index.html

APPENDIX B: TEMPLATE FOR MONITORING TRENDS IN INTERNET CENSORSHIP

NEGATIVE TRENDS	Incidents	Reference of sources where reported	Reflection on implications	Suggestions on action
Internet related privacy				
Email interceptions				
• Deep packet inspection				
• Method not stated				
Registration with an ISP				
• On purchase of Internet access				
Control at cybercafés				
• Presentation of identification				
• Installation of monitoring software				
• Filtering customers' web browsing				
Policing of email and other electronic messages				
Outsourcing of censorship				
• Enforced by legislation (e.g. *cybercafés*)				
Inadequate protection of the right to privacy				
Inadequate data protection				
Blocking access to Internet content				
Use of web-filtering software e.g. Websense				
• Targeted locations e.g. schools and universities				
Topics typically blocked				
• Anti-government				
• Specific events				
• Religion e.g. repression of Christians				
• Use of a list of keywords e.g. "freedom"				
Blocking specific Internet resources and/or topics addressed from these tools				
• Use of search engines for specific topics				
Ubiquitous society and control				
Outsourcing censorship and surveillance				
• Legal enforcement				
• Enforced for cybercafés				
Censorship of Internet related media				
Media affected				
• Text				
• Audio				
• Video				
• Video games				
• Websites				
• News portals				
• Social media				
• Blogs				
• Microblogs (e.g. Twitter or country-specific)				
Means of censorship				
• Hacking				
• Interception of incoming data by government computers				
• Denial-of-service				
• Self-censorship				
• Intimidation				
o In general				
o Targeting bloggers				
o Targeting journalists				
• Restrictions on setting up websites				
User rating				
Halaal Internet				
Criminalization of legitimate expression				
Closing of websites (full, partial)				
Shutdown of online social networks				
Actions against journalists, bloggers, etc.				
• Arrestment and detention				

• Imprisonment				
Regulation & legislation				
• Acts				
• Government models				
• Local / domestic				
• Global				
Enforcement of legislation				
• Police				
• Agencies				
Control of website creation and registration				
• Control of creation				
• Registration required				
• Costs				
Support for Internet censorship (not legally or government enforced)				
• Computer companies				
• Internet companies				
• Search engines				
• Internet Service Providers				
Enforcing regulations and Internet censorship				
State security services				
• Infiltration of online networks				
• Monitoring of discussions e.g. about planned actions				
• Hacking				

POSITIVE TRENDS				
	Incidents	Reference of sources where reported	Reflection on implications	Suggestions on action
Reactions to Internet censorship				
Changes in groups, group dynamics, responses and actions of groups				
Gaining access to censored content through				
• Circumvention software				
• Sharing files through peer-to-peer (P2P) networks or overseas file transfer protocol (FTP) sites				
Avoiding government blocks on their blog posts				
• Misspelling keywords that trigger filters				
• Posting their words as an image file				
• Using allegory to criticize government repression				
Side-stepping e-censorship				
Using specialised software such as FREEBIRD				
Tracing blackouts				
Involving public opinion				
Secure login				
Use of web proxy software				
Anonymous online communication				
Using cryptic code words				
Gaining funding to support technological innovation and indigenous efforts to expand the space for free expression online				
Cyber actions against Internet censorship				
Cyber and virtual demonstrations and protest				
Ways of showing opposition to Internet censorship, e.g. TUMBLR				