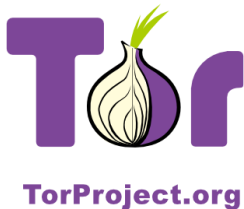


Freedom of Speech & The Internet

Andrew Lewman
andrew@torproject.org

October 20, 2009



Universal Declaration of Human Rights

Article 19

“ *Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.*

Article 20

“ *Everyone has the right to freedom of peaceful assembly and association.*

Online archives are easily censored

raising for the Indian-born Briton, coinciding as it does with his plans to secure a big player in the City. Reuben and his elder brother David launched a website last month announcing their inten-

tion to buy the shares of the company that was down their activities in Russia. Simon and David, 64, may together be worth £2.1 billion according to a recent estimate.

makes some unflattering allegations about Simon's methods. Anglo, once part of Spain's Repsol oil group, was a general petrochemical group about as service stations in

the company's chances of acquisition. Reuben is wanted to buy himself in the event. Save was not sold to either Anglo or Reuben. Another aide would comment on the case last week, but Reuben is

case against the government of Kazakhstan, which had confiscated their assets in the country. They also went to court to fight an attempt by gangster interests to appropriate their stake in Russia's

entrepreneurial success. Simon Reuben's next legal battle - against Anglo Petroleum - is unlikely to come to trial before next year, but he is clearly not afraid of a fight.

So, Norma, any regrets this time?

Lord Lamont has kept some odd company since leaving politics. Now a company he chairs faces collapse. **Jamie Doward** reports

THE FAMOUSLY lathered himself while singing 'Je ne regrette rien' when Britain was luxuriatingly re-entranced from the European Exchange Rate Mechanism, but his last debate whether David Davis, Lord Lamont can affect such a changey disposition. The contrasting business investment company jet top careers, which he got his heart, following his ignominious exit as Chancellor of the Exchequer, has proved elusive for Norman Stewart Hughes Lamont. Several of his business ventures have

fallen by the wayside while others have landed him in deep controversy, raising questions over his competence as a businessman. Lamont, 61, is battling for credibility as one of the combative but chatty members of the Galileo - whose shares have crashed from 20p to 1p - can continue as a police concern. It is the latest setback for Davidson, who achieved notoriety last year when the Financial Services Authority launched an investigation into a spread bet he took out shortly before another firm he was involved with, Cybertec, was floated. Why Lamont - who joined investment bank NM Rothschild after leaving the Cabinet - ended up as chairman of the tiny floated company is open to question. But the chance to share in its potentially lucrative future must have been a consideration. Unlike some of his contemporaries (Clare, Hagedorn) Lamont - who declined to return calls - is not hugely wealthy. He left British Telecom in 1986 and several other companies he joined experienced difficulties. The Taiwan Investment Trust, BCF Finance, Equity Growth and the Philippine Securities all ended up in liquidation. A number of companies, on whose board Lamont sits, are not capable of delivering him the sort of salary associated with Tory grandees. Chagny Energy is a bidder with a near anonymous profile, and sitting on the board of the Indomest Fund, an investment trust, is unlikely to be a huge money-spinner.

But Galileo's board believed it had potential to produce stellar financial rewards. The company boasted that it had a pipeline of exciting companies ready to come to market. As Sir Anthony Griffin, one of the non-executive directors, put it when Lamont was appointed in July last

year: 'Lord Lamont shares our view of the company's prospects and opportunities.' The company had great hopes for its first investment, Fluid Conditioning Systems, which had developed reputable oil solutions for the automotive industry. Another growth business was Scientific Detectors, which made analytical equipment for use in pharmaceuticals and petrochemical industries. By the end of year Calles was predicting that three of its investments would total on the same day as the fourth quarter of 2002. But the title score never happened, possibly because years superseded the chance of getting the company away at a reasonable price.

Fortunately for Lamont, he has other business interests to fall back on: it is a consolation to fall back on for a consultant. He is also a shareholder in a property company run by the Iranian-born brothers Robert and Vincent Tchenguiz. Roths is reputed to be a valuable property portfolio value of £1bn. He is also the largest shareholder in tenanted pub giant Palmolive. The brothers - who each property - are ranked 90th in Britain's rich list. Lamont is also a director of Scottish-based 1 Life, the Bermuda-based company that provides reinsurance products to the life insurance industry and wealth management services to high net worth individuals.

There then the directorship of Balf Group, the metals trader headquartered in London, which has huge interests in Russia. Balf co-owns Siderex International with LNM, the steel group whose owners parent company is run by controversial millionaire Lakshmi Mittal. His bid

for Siderex was famously backed by a supportive letter, from Tony Blair. In addition to sitting on the board of the British Iranian Chamber of Commerce, Lamont is director of the British Romanian Chamber of Commerce and organised several dinners to help advance business relations between the two countries. One dinner - in honour of Russian president Vladimir Putin - was attended by millionaire metal trader Virendra Bhatnagar, now the subject of a Serious Fraud Squad investigation. Another - for the Russian Prime Minister and attended by Trade secretary Patricia Hewitt - was sponsored by Mittal.

Lamont's appeal to powerful businessmen must be at least in part in his extensive political contacts. He is chairman of a little-known, but hugely influential right-wing body called Le Cercle. Con-



Skills for Business is launching two Sector Skills Councils. To find out more about how employers are responding to the UK's skills crisis, see next Sunday's Observer Business Section

The Observer **skills** FOR BUSINESS

Lord Lamont is battling for credibility as a company he chairs lingers on the brink of collapse. The financial arm of the British Iranian Chamber of Commerce, Lamont's most controversial business relationship, which has lost billions to the CIA, Le Cercle - also known as 'The Atlantic Circle' - describes itself as an 'informal group of European and American senior businessmen - politicians, retired ambassadors, former generals, lawyers and active participants in banking, oil shipping, publishing and trading companies'. Guest attendees have included Richard Nixon, Henry Kissinger, the Sultan of Oman, Romanus' Illianu and King Hussein of Jordan. Comparisons with the highly secretive Bilderberg Group

British last Monday. Auchin, who is known to have attended the Le Cercle meetings, made millions selling Italian warships to the Iraqi regime in 1980. Lamont is a director of one of Auchin's biggest companies, Compagnie Internationale de Participations Financieres of

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http://browse.guardian.co.uk/search?IDim=N%3D3097%2B3329&search=jam Google

[UK mobile giant seeks £7.5bn Dutch merger](#)
The Observer, Sunday April 6 2003
Jamie Doward, deputy business editor
A management team from mobile phone giant mmO2 has held exploratory talks with counterparts at Dutch telecom operator KPN to create a £7.5 billion pan-European wireless champion. Informed sources stressed that the talks, held within the last two months, were informal and nothing was currently being discussed. However, news that the two sides are contemplating merger (...)

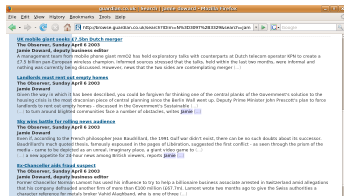
[Landlords must rent out empty homes](#)
The Observer, Sunday April 6 2003
Jamie Doward
Given the way in which it has been described, you could be forgiven for thinking one of the central planks of the Government's solution to the housing crisis is the most draconian piece of central planning since the Berlin Wall went up. Deputy Prime Minister John Prescott's plan to force landlords to rent out empty homes - discussed in the Government's Sustainable (...) (...) to turn around blighted communities face a number of obstacles, writes **Jamie** (...)

[Sky wins battle for rolling news audience](#)
The Observer, Sunday April 6 2003
Jamie Doward
Even if, according to the French philosopher Jean Baudrillard, the 1991 Gulf war didn't exist, there can be no such doubts about its successor. Baudrillard's much quoted thesis, famously espoused in the pages of Libération, suggested the first conflict - as seen through the prism of the media - came to be depicted as an unreal, imaginary place, a giant video game to (...) (...) a new appetite for 24-hour news among British viewers, reports **Jamie** (...)

[Ex-Chancellor aids fraud suspect](#)
The Observer, Sunday April 6 2003
Jamie Doward, deputy business editor
Former Chancellor Norman Lamont has used his influence to try to help a billionaire business associate arrested in Switzerland amid allegations that his company defrauded another firm of more than €100 million (£67.7m). Lamont wrote two months ago to give the Swiss authorities a character reference for metals broker Vahid Alaghband, who is one of three (...)

The Internet facilitates centralisation

- Centralised systems work better: cheaper, more versatile, and more efficient
- By eliminating distance, the Internet allows greater centralisation
- Centralised archiving of physical newspapers is awkward, but online archiving works well
- This makes life easier for readers, and censors too
- Many libraries are now dropping archiving of paper in favour of electronic subscriptions



George Orwell was an optimist



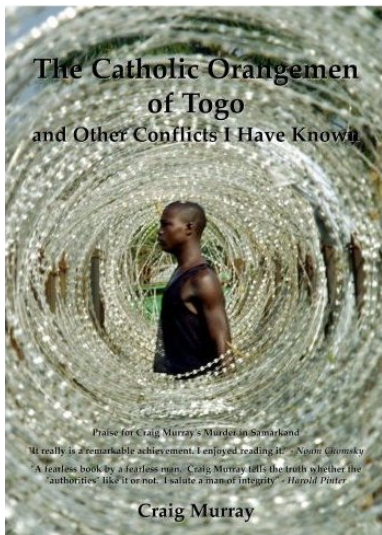
Who controls the past, controls the future: who controls the present controls the past

— George Orwell, Nineteen Eighty Four, 1949

The re-writing of history is now much more efficient than when George Orwell imagined armies of Winston Smiths cutting holes in newspaper archives

The Internet eases publication too

- “The Catholic Orangemen of Togo”, by Craig Murray, was dropped by its publisher due to libel threats
- Even the Cambridge University Press pulped a book, “Alms for Jihad” by J. Millard Burr and Robert O. Collins, following legal action
- The lack of support from a publisher and network of book shops would previously be devastating
- However, the Internet facilitates self-publishing and marketing



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Internet architecture allows censorship

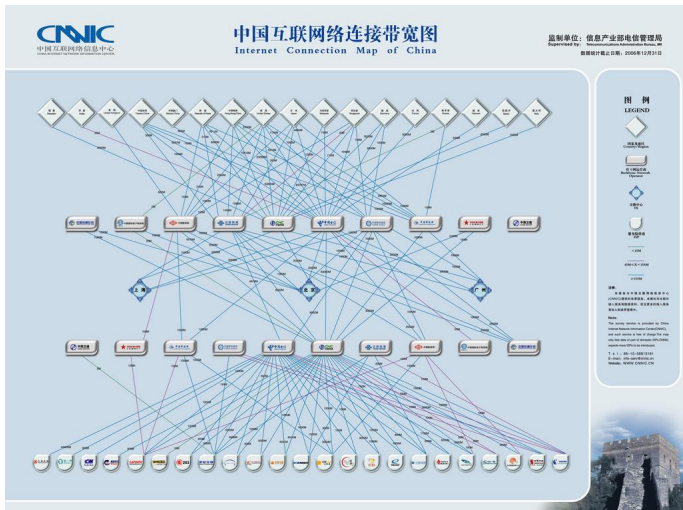


Diagram: China Internet Network Information Center

What is being blocked, and why

- Out of the 40 countries studied by the OpenNet Initiative in 2006, 26 censored the Internet in some way
- The types of material censored varied depending on country, e.g.:
 - Human Rights (blocked in China)
 - Religion (blocked in Saudi Arabia, UAE, Iran, Bahrain)
 - Pornography (blocked in Saudi Arabia, UAE, Iran, Bahrain, Singapore, Burma, ...)
- Other issues censored include: military and militant websites; sex education, alcohol/drugs, music; gay and lesbian websites; news



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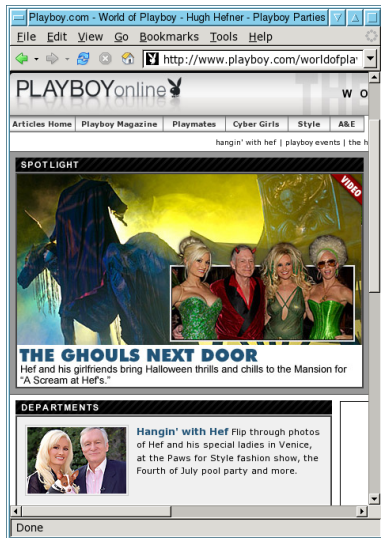


The screenshot shows a web browser window with the address bar displaying 'http://www.islameyat.com/english/C'. The page content includes a header with navigation links and a table with the following data:

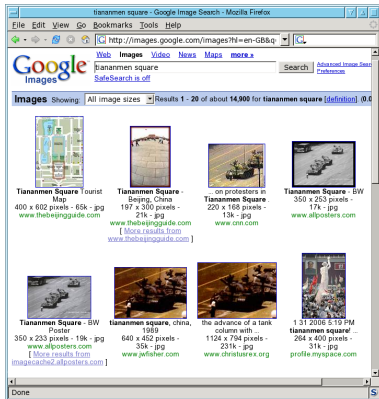
Prophecies & fulfillments about Jesus	Old T
1.He was to be born in Bethlehem	MI
2.He was to be born of virgin	ISAIA
3.He was to be prophet like Moses	Due 18
4.He was to enter Jerusalem in triumph	Zech
5.He was to be rejected by his own	Isaia psalm
6.He was to be betrayed by one of his followers	Psa
7.He was to be tried and condemned	Isai
8. He was to be silent before his accusers	Isai
9. He was to be struck and spat on by his	Isai

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Even if a site is accessible, it may be removed from search engine results



Searching for “Tiananmen Square” on Google.com and Google.cn

Resisting Internet censorship



The Net interprets censorship as damage and routes around it.

— John Gilmore, 1993

No longer true on a technical level: censorship is in the routers.

Remains true on a social level: when material is censored, people distribute copies and draw attention to them

But what if people are too afraid to do this?

Self-censorship through fear, intimidation, and punishment

People can be intimidated into not testing rules through fear of detection and retribution



"I call on Egyptian government officials to take the necessary procedures to protect the Egyptian youth from the spread of subversive religious ideologies among them by permanently shutting down religious institutions in this country."

— Kareem Amer (sentenced to four years' prison in Egypt)

Freedom of speech and privacy

United States Constitution: 1st Amendment

“ *Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.*

McIntyre v. Ohio Elections Commission

“ *Protections for anonymous speech are vital to democratic discourse. Allowing dissenters to shield their identities frees them to express critical, minority views ... Anonymity is a shield from the tyranny of the majority ... It thus exemplifies the purpose behind the Bill of Rights, and of the First Amendment in particular*

Internet surveillance is pervasive

- Conventional surveillance methods had to be targeted
- Internet censorship is capable of monitoring everyone, all of the time
- Governments are increasing monitoring: SORM (Russia), Golden Shield (China), and Interception Modernisation Programme (UK)
- 1 in 7 East German citizens worked for the Stasi. Today we can achieve the same results with a fraction of the cost



Traffic data surveillance

- Traffic data (who talks to whom, how often and for how long) is the core of intelligence capabilities
- This information is cheaper to record and store, compared to full content
- Because it can be easily processed by computer, data mining techniques can be used to understand social structures

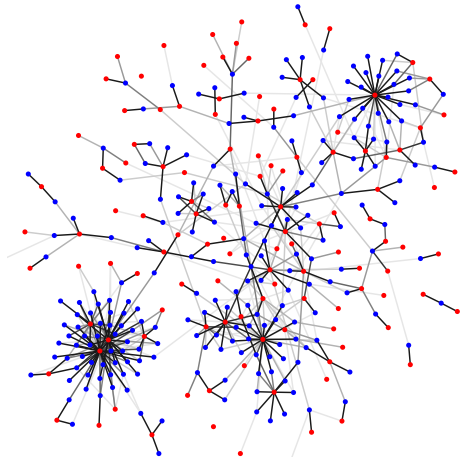


No government of any colour is to be trusted with such a roadmap to our souls

— Sir Ken Macdonald, former director of public prosecutions, on the UK Interception Modernisation Program

Importantly, information on social networks can be derived

- Communities
- People



The Transparent Society

- David Brin proposed that a world of pervasive surveillance, balance could be maintained by allowing everyone to monitor everyone else
- Bruce Schneier retorted that surveillance amplifies existing powers
- Many countries restrict anonymous speech (e.g. Germany and China)
- It is easy for those in power to call on the weak to link their names to opinions



Photo: Manos Simonides

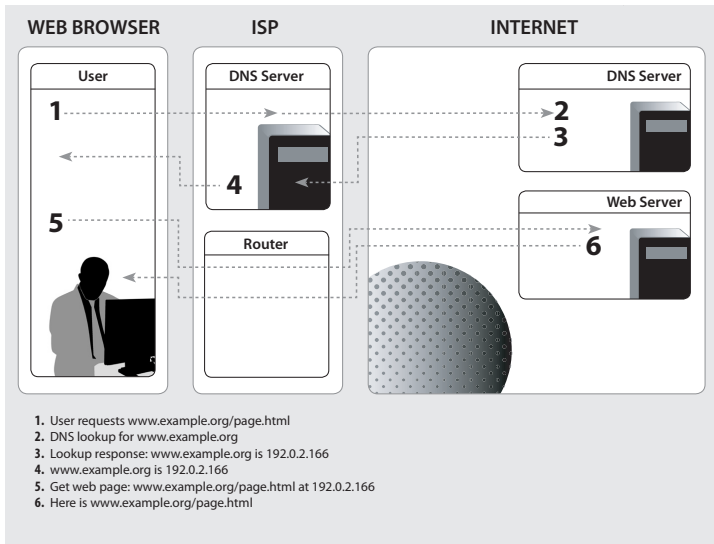
Censorship resistance systems

- Software to resist censorship should
 - Hide where user is visiting (to prevent blocking)
 - Hide who the user is (to protect them from intimidation)
- These properties should be maintained even if the censorship resistance system is partially compromised

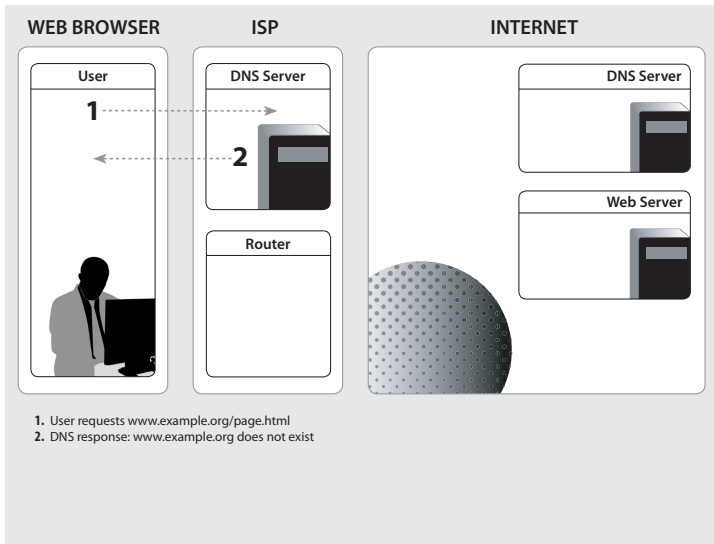
Blocking with technology

- When a country's government controls international connectivity, they can block requests for banned websites
- There are a number of different approaches (DNS blocking, IP address blocking, etc.)
- Software may be produced in-country, but often is an adapted commercial product
- These companies not only make the software, but provide a continuously updated list of websites to be blocked

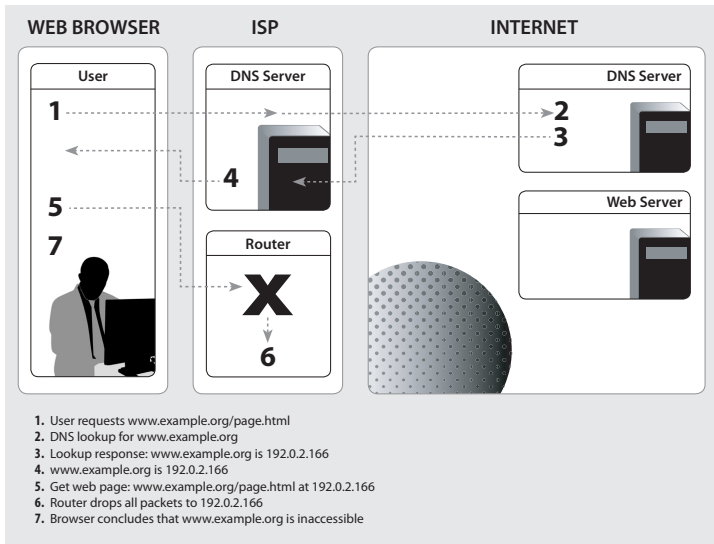
Normal web browsing



DNS tampering



IP blocking



Tradeoffs in blocking systems

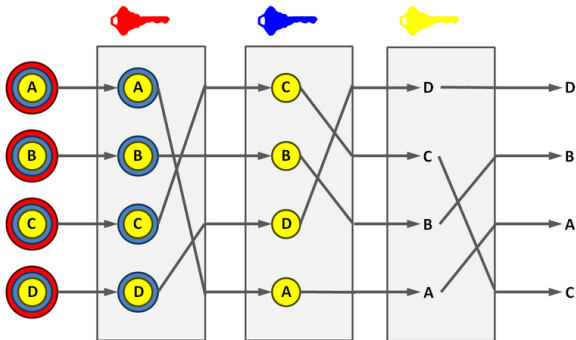
- DNS blocking
 - Easy and cheap to implement
 - Blocks at domain name granularity – overblocks protocols, webpages
 - Trivial to bypass
- IP blocking
 - Easy and cheap to implement
 - Blocks at IP address (perhaps port) – overblocks virtual hosting
- Proxy blocking
 - Expensive to implement
 - Blocks at webpage level – low overblocking
- Hybrid blocking – IP based redirection to proxy
 - Tricky to get right, but cheap
 - Has some vulnerabilities
 - Blocks at webpage level – low overblocking

There are many other reasons why people might want privacy

- Ordinary people
 - To avoid personal information being sold to marketers
 - Protect themselves when researching sensitive topics
- Militaries and law enforcement
 - To carry out intelligence gathering
 - Protect undercover field agents
 - Offer anonymous tip lines
- Journalists
 - To protect sources, such as whistle blowers
- Human rights workers
 - To publicise abuses and protect themselves from surveillance
 - Blogging about controversial subjects
- Businesses
 - To observe their competition and build anonymous collaborations

Anonymous communication

- People have to hide in a crowd of other people (“anonymity loves company”)
- The goal of the system is to make all users look as similar as possible, to give a bigger crowd
- Hide who is communicating with whom
- Layered encryption and random delays hide correlation between input traffic and output traffic



Tor is a low-latency anonymity system

- Based on technology developed in the Onion Routing project
- Commonly used for web browsing (works for any TCP traffic)
- Originally built as a pure anonymity system (hides who is talking to whom)
- Now designed to resist censorship too (hides whether someone is using the system at all)
- Centralised directory authorities publish a list of all servers



TorProject.org

Tor hides communication patterns by relaying data through volunteer servers

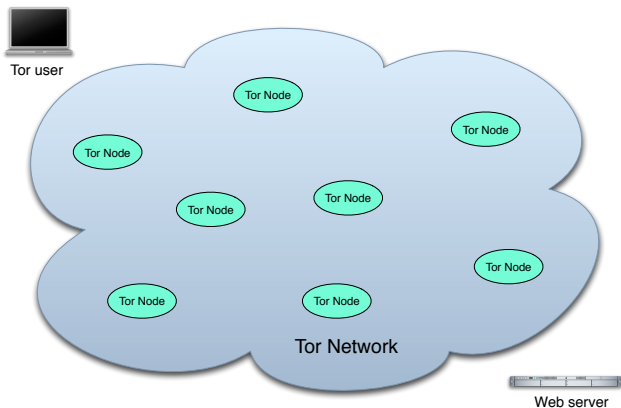


Diagram: Robert Watson

Tor hides communication patterns by relaying data through volunteer servers

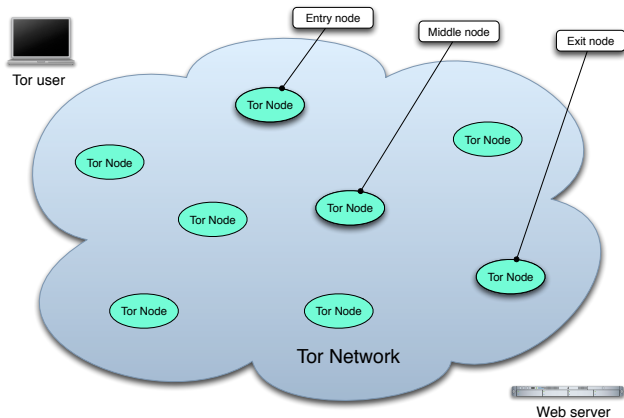


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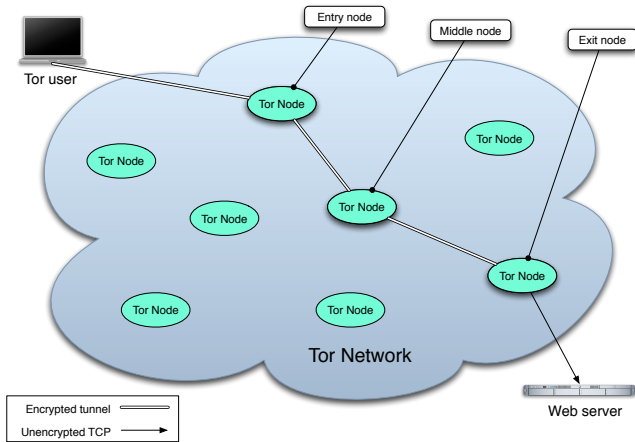


Diagram: Robert Watson

Tor hidden services allow censorship resistant hosting of services

MoD 'how to stop leaks' document is leaked - Wikileaks - Torora

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http://gaddbiwdfatpglkq.onion/wiki/MoD_%27how_to_stop_leaks%27_document_is_leaked

MoD 'how to stop le...

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MoD 'how to stop leaks' document is leaked

October 4, 2009

By **Tom Chivers** (*Telegraph*)^[1]

The Defence Manual of Security is intended to help MoD, armed forces and intelligence personnel maintain information security in the face of foreign spies and others.

But the 2,400-page restricted document has found its way on to Wikileaks, a website that publishes anonymous leaks of sensitive information including governments, corporations and religions.

Known in the services as Joint Services Protocol 440 (JSP 440), it was published in 2001. As Wikileaks notes, it is the document that is used for monitoring of certain websites, including Wikileaks itself.

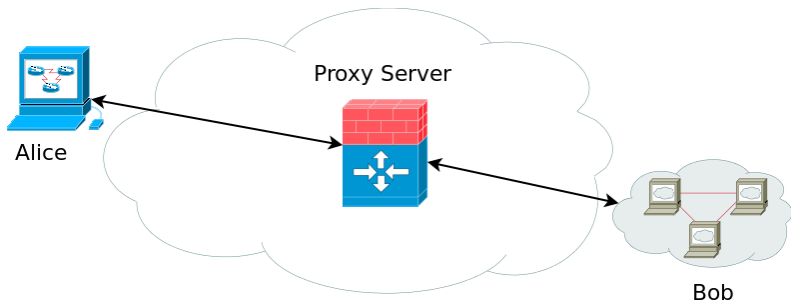
Under the section "Leaks of Official Information", it says: "Leaks usually take the form of reports in the public media which appear to involve disclosure of official information (whether protectively marked or not) that causes political harm or embarrassment to either the UK Government or the armed forces concerned..."

"The threat [of leakage] is less likely to arise from positive acts of counter-espionage, than from leakage of information through disaffected result of the attentions of an investigative journalist, or simply by accident or carelessness."

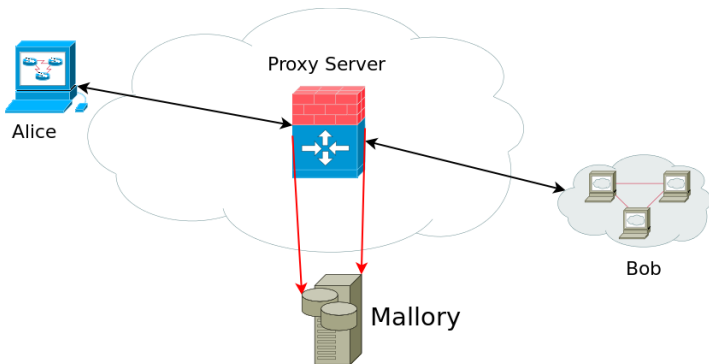
The document is particularly keen to avoid the attentions of journalists, noting them as "threats" alongside foreign intelligence services, critics and disaffected staff.

- Main Page
- Main Page (secure)
- Country index
- About
- Contact us
- Media Kit
- Writer's Kit
- Donate
- Help
- Live Chat
- SUBMIT DOCUMENTS

How is Tor different from other systems?



How is Tor different from other systems?



Limitations of censorship resistance

- Censorship resistance is thought controversial – especially by the censors
- There is something for everyone to like, and something for everyone to dislike, going on with censorship resistance systems
- Bad people do use them to do bad things (for many different definitions of bad people)
- It is impossible to block bad uses, even if we could come up with a common definition of bad content
- The systems are not perfect, so it is possible some people will be caught

Conclusions

- The Internet and centralisation can both improve and harm freedom of speech
- Slogans regarding the borderless nature and inherent freedoms of the Internet are frequently wrong
- Technical details matter: how a system is implemented can make a radical difference
- Technologies can be used to resist censorship and improve privacy
- However, policies must be changed too and pressure is needed on legislators



One Version of the Future

“ *I'd like to change the design of the Internet by introducing regulation—Internet passports, Internet police and international agreement—about following Internet standards. And if some countries don't agree with or don't pay attention to the agreement, just cut them off.*

— Eugene Kaspersky, Co-Founder & CEO of Kaspersky Labs

Another Version of the Future

- Increased funding of research and development for circumvention and anti-censorship technologies
- Policy and Legal frameworks for free speech and anonymity
- Mobile devices and telco innovation
- Ambient connectivity

Credits

- Thank you to Steven J. Murdoch, <http://www.cl.cam.ac.uk/users/sjm217/>, for the research and basis for this presentation.
- Photographer and Diagram credits as listed throughout the presentation.