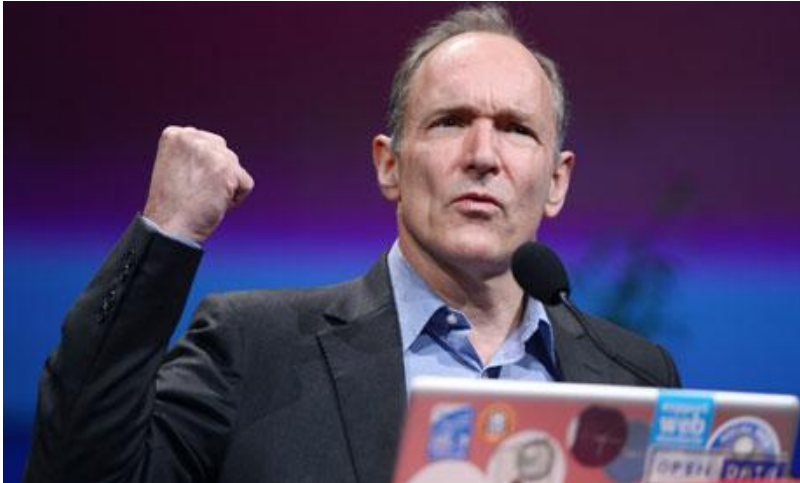


## The Guardian's Open 20: fighters for internet freedom

**From politicians and professors to computer scientists and the first programmer, champions of the open internet.**

James Ball

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British computer scientist Tim Berners-Lee, who invented the world-wide web, champions open data to governments. Photograph: Philippe Desmazes/AFP/Getty Images

### **Rickard Falkvinge**

#### **Founder, the Pirate party**

Falkvinge founded the Swedish Pirate party in 2006 to focus on reforming copyright, patents and file sharing laws. The party now has an often marginal presence in 22 countries, with significant presence in Sweden, where it has two members of the European parliament, and Germany, where it polls as the third biggest political party.



Birgitta Jonsdottir, the MP instrumental in Iceland becoming a sanctuary for free speech.

### **Birgitta Jonsdottir**

#### **MP, The Movement, Iceland**

A poet-activist turned politician, Jonsdottir has been a member of the Icelandic parliament since 2009. Best known for her involvement in bringing the WikiLeaks Collateral Murder video to the public, Jonsdottir has also been instrumental in Iceland's efforts to become a free-speech haven, and is one of the plaintiffs suing the US government over the proposed surveillance powers granted by the NDAA bill.

### **John Perry Barlow**

#### **Co-founder, Electronic Frontier Foundation**

The EFF, founded in 1990, described itself as "the first line of defence" when online freedoms come under attack. Through a mix of direct action, legal challenges and political advocacy, the group lobbies on freedom of speech,

surveillance and intellectual property issues. The former Grateful Dead lyricist was one of the EFF's founding members and has been one of its loudest public voices ever since.

### **Jacob Appelbaum**

#### **Advocate, Researcher and Developer, Tor project**

Appelbaum, a computer science researcher at the University of Washington, is one of the core team of the Tor project, which protects the anonymity of thousands of internet users across the world. Also described as the group's main advocate, Appelbaum came to wider public attention after being repeatedly stopped and searched by US officials at airports, who confiscated his electronic equipment, after he stood in for Julian Assange at a talk.

### **Julian Assange**

#### **Editor-in-chief, WikiLeaks**

The driving force behind WikiLeaks, Assange has directed the publication of secret documents on the Afghan and Iraq wars, Guantánamo Bay prisoner files, and 250,000 US diplomatic cables. Assange is nothing if not a divisive figure, with his many disputes a matter of public record across the world – but despite these (or perhaps because of it), Assange is perhaps the figurehead of the free internet movement and a powerful voice because of it.

### **Ada Lovelace**

#### **Computer programmer**

Ada Lovelace, who died in 1852, serves as an inspiration on the open internet. Lovelace worked with Charles Babbage on his difference engine, wrote some of the first programs for it, and so is often described as the world's first computer programmer. Unlike Babbage, she foresaw the role of computers in making music, art and more. In recent years Ada Lovelace Day has become an online institution, aimed at promoting the role of women in science and technology, and upping their profile in the media.

### **Richard Stallman**

#### **Founder, Free Software Foundation**

One of the world's most vocal advocates for free software (rather than open source, a term he hates), Stallman tours the world preaching the virtues of software which is free to use and free to edit. Stallman is more than a proselytiser, though – he's also one of the principal coders of many components of GNU (an operating system he established).



A masked hacker of the Anonymous group hacks the Elysée Palace website in January 2012.

### **Sir Tim Berners-Lee**

#### **Inventor of the world wide web**

As inventor of one of the most visible areas of the internet – the world-wide web – Berners-Lee's role in internet history was already secure. He hasn't, however, rested on his laurels: he is instrumental in pushing open data at high level to governments around the world, and is a campaigner against a two-tier internet. He's also recently apologised for the two forward slashes at the start of web addresses (`http://`), which he admits are "completely unnecessary".

### **Professor Sebastian Thrun**

#### **Founder, Udacity**

Professor Thrun was not a man needing to worry about his next paycheck: as a tenured professor in artificial intelligence at the elite Stanford University, he had a job for life. Not content with teaching to a relatively small number of students, he opened up access to his lectures online for free, through a site called Udacity. In its first year, more than 140,000 students signed up for his class.

## **Anons**

### **Legion, everywhere**

The Anonymous rallying cry – "We are Anonymous. We are legion. Expect us" – is not to everyone's taste, but it's certainly well known. Unlike its sister group Lulzsec, the Anonymous collective is genuinely fragmentary and leaderless – and so has continued despite FBI arrests largely paralysing Lulzsec. The hackers recently took the Home Office and No 10 websites briefly offline in protest at proposed internet surveillance laws.

## **Bram Cohen**

### **Chief Scientist, BitTorrent**

Bram Cohen is not a popular man in Hollywood. Cohen invented not only the peer-to-peer technology behind the BitTorrent network, but also the software for users to share files. The technology now claims more than 100 million active users each month, downloading about 400,000 files every day – some legal, but many copyrighted films, music and TV programmes.



Peter Sunde was one of the people behind Pirate Bay, a portal for file sharers, and founded Flattr, a micropayments site for bloggers.

## **Linus Torvalds**

### **Chief architect, Linux**

For those unwilling to fork out for Microsoft Windows or Apple's Mac OSX, there is a free alternative available, which comes with the added benefit (for coders) that it's open to modify and personalise – Linux. Linus Torvalds is the Finnish-American software engineer who initiated the project, and he's shepherded the numerous different distributions ever since as an advocate for open source and free software.

## **Lawrence Lessig**

### **Founder, Creative Commons**

While many hacktivists are content merely to ignore copyright laws and risk the consequences, Lawrence Lessig has taken a gentler approach, introducing a type of licence allowing the sharing of content without charge. People who create works which would normally be subject to copyright can use Creative Commons (CC) licences to allow free reuse, adding non-commercial or non-modifying clauses if they wish. More than 100m images across the net are already available under CC licences.

## **Alex MacGillivray**

### **General counsel, Twitter**

Alex MacGillivray, the chief lawyer for Twitter, is credited with coming up with the company's mantra of being "the free-speech wing of the free-speech party", and has been a driving force in the site's efforts to retain maximum transparency while not falling foul of the law. Recent efforts to move censorship of tweets to a country-by-country basis, rather than blocking worldwide, initially provoked a backlash but were eventually seen by many as a clever way to take minimal required action under the law

## **Dr Susan Landau**

### **Cybersecurity researcher, Guggenheim Fellow**

Susan Landau is a visiting scholar in the computer science department of Harvard University with a 30-year publishing history on cyber-security, surveillance and cryptography, and is an advocate of users' privacy, and the risks of embedding surveillance in routine communications. She is also an advocate for women in science, and runs the ResearchHers email group. She won the Women of Vision social impact award in 2008.

**Jimmy Wales****Chairman, Wikimedia foundation**

Jimmy Wales is the man behind Wikipedia, the world's biggest encyclopedia (with 21m articles), and one compiled entirely by volunteer editors, with anyone able to edit articles at any time. On top of these achievements, Wales has recently boosted his open internet credentials by encouraging the site's board to waive the site's famed neutrality for the first time by participating in an internet blackout, effectively closing the English-language site for a day, in protest at the US's proposed Sopa law against piracy.

**Peter Sunde****Co-founder, Pirate Bay**

Peter Sunde was one of the people behind the Pirate Bay – a search engine granting access to more than 4m files on the BitTorrent network, and a key portal for file sharers everywhere. The site has long evaded legal attempts at shutdown, but Sunde has moved on – founding Flatlr, a micropayments site aimed at giving independent sites and blogs a voluntary revenue stream. Pirate Bay, meanwhile, claims it is working on servers on airborne drones, to ensure no government is ever able to take it offline.

**Clay Shirky****Writer, assistant professor at New York University**

Clay Shirky was one of the first passionate advocates for crowdsourcing, collaboration and aggregation of online content and journalism, and consequently of the open institutions needed to allow such efforts to take place. Shirky encourages institutions to reform ready for the networked world, and is credited as one of the thinkers who inspired the Guardian's open journalism efforts.

**Aaron Swartz****Programmer, activist**

If a Tunisian market-seller began the Arab spring, it is perhaps fair to credit Aaron Swartz with fuelling the "academic spring", if allegations against him are proved. Swartz was accused of downloading more than 4m academic articles from the JSTOR site in an attempt to improve open access to academic literature. After his indictment – to which he pleads not guilty – others around the net shared tens of thousands of papers without permission. Moves to free up access to academic papers through legitimate channels have now accelerated, with a leading funder, the Wellcome Trust, and UK ministers now backing open access.

**Heather Brooke****Journalist and activist**

A campaigner for freedom of information and against the surveillance state, Heather Brooke was instrumental in the legal actions which exposed MPs' abuse of their expenses system. During her research into hacker culture and online activism, Brooke obtained the WikiLeaks embassy cables and was one of the journalists working on the project. She sits on the advisory board of the Open Rights Group and is a visiting professor at City University, London.