

An Open Web

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goes wrong. So be careful!

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Introduction

The Web is Closed

“As much as we love the open Web, we’re abandoning it.”

-Chris Anderson, WIRED Magazine

The Web was meant to be Everything. As the Internet as a whole assumes an  
increasingly commanding role as the technology of global commerce and  
communication, the World Wide Web from its very inception was designed to  
be a free and open medium through which human knowledge is created,  
accessed and exchanged.1 But, that Web is in danger of coming to a close.

The Web was meant to be Free. It laid out a language of HyperText, which  
anyone could use to author electronic documents and connect them together  
with links. The documents in totum were meant to form a global web of  
information with no center and no single point of control.2 The first Web  
browser was also a Web editor, and this principle that any node in the  
network can both consume and create content has more or less been  
defended to this day.

The Web was meant to be Open. It detailed a common interface that could be  
implemented on any computer. This innovation overcame the obstacles of  
incompatible platforms and tools for the sharing of knowledge on the Net,3by defining a Hypertext Transfer Protocol (HTTP) and other standards for the  
discovery and communication of online data. The technical specification of  
the World Wide Web was offered for free as a non-proprietary, open standard  
that could be used by anyone for commerce and culture and everything in  
between.

Within a decade of its birth the World Wide Web had blossomed, and by a  
simple measure of bandwidth usage it had become a dominant protocol for  
data exchange on the Internet. It was the openness of the Web that allowed  
for this revolution, and in the years to come countless new technologies and  
innovations would be built on top of the open Web.

By the turn of the millennium, however, the share of Web usage as a  
percentage of total Internet traffic had begun to decline, displaced by more  
bandwidth-intensive activities like video streaming, peer-to-peer file sharing,  
voice-over-IP and online gaming.

In point of fact, World Wide Web traffic has continued to grow as more and  
more users come online. Yet more insidious changes have come about. The  
ever-shrinking proportion of the Web’s share of total Internet traffic has been  
eaten away from within by new data transactions that flow over HTTP but  
hardly involve a Web browser or Hypertext, or even a human being.4 More  
and more of these transactions, rather than relying on free and open  
standards, involve commercial applications connecting to proprietary online  
services using custom machine-to-machine protocols or application  
programming interfaces (APIs). They transpire between network services  
inter-communicating without human intervention, while others take place on  
mobile devices running apps tailor-made to limited hardware specifications  
and screen-size, rather than a general-purpose web browser.

This seemingly undeniable reversal of fortune for the free and open web led  
Wl RED Magazine to proclaim with a straight face in 2010: The Web is Dead.5

In truth the Web is thriving. But as a distinct species of human knowledge,  
technology and innovation, it cannot escape the threat of insidious mutation  
or outright extinction. The prospects of the World Wide Web as a free and  
open platform are hardly guaranteed. The only way to ensure its survival is to  
engage directly with the tools and techniques of the Open Web. If you use the  
Web at all, you cannot leave this fight unscathed. What threatens the Web’s  
freedom, likewise impinges on your own.

This book will take the view that the Open Web is an essential technology and  
cultural practice for the future of the Internet and human society. The Web as  
we know it has had a positive and even revolutionary impact on key areas of  
science, technology, politics and culture. It has opened up new fields of  
individual rights and responsibilities, in terms of legal structures, community  
standards, privacy and the control of data. The rapid pace of technological  
change is bringing ever more powerful threats (and opportunities) to the  
Open Web.

The fight for the Open Web is taking place at a global level of interconnected  
technologies, communities and networks. The fight for the Open Web is your  
own.

1. The World Wide Web was invented in 1990 by English engineer and computer scientist Sir Tim Berners-  
   Lee, when he worked at CERN in Geneva, Switzerland. For his achievement he was named by Time  
   Magazine as among the most important people of the 20th century: “The World Wide Web is Berners-  
   Lee’s alone. He designed it. He loosed it on the world. And he more than anyone else has fought to keep it  
   open, nonproprietary and free.” Tim Berners Lee-Time 100 People of the Century. Time Magazine.  
   <http://205.188.238.181/time/time100/sdentist/profile/bernerslee.htmr>
2. “HyperText is a way to link and access information of various kinds as a web of nodes in which the user  
   can browse at will.... This forming of a web of information nodes rather than a hierarchical tree or an  
   ordered list is the basic concept behind HyperText.” Tim Berners-Lee and Robert Caiiliau. WorldWideWeb:  
   Proposal fora hypertexts Project. (1990) http://w3.0rg/Proposal.htmr
3. “The current incompatibilities of the platforms and tools make it impossible to access existing  
   information through a common interface, leading to waste of time, frustration and obsolete answers to  
   simple data lookup. There is a potential large benefit from the integration of a variety of systems in a  
   way which allows a user to follow links pointing from one piece of information to another one.” Ibid.
4. “One of the most important shifts in the digital world has been the move from the wide-open Web to  
   semiclosed platforms that use the Internet for transport but not the browser for display.” Chris Anderson  
   and Michael Wolff. The Web Is Dead. Long Live the Internet. (2010)

<http://www.wired.eom/magazine/2010/08/ff_webrip/all/1>

1. Ibid.''

The Future is Open

The Web sits atop a thick stack of technical standards that predate, support  
and supplement it. A system of networking protocols that make up the  
Internet had to reach a state of of stability, maturity and commonality so that  
the Web of Hypertext and linked documents could thrive upon it. A very  
basic, open yet powerful structure provided the lattice for the growing Web.

Nearly 100% of this underlying Internet infrastructure is open and  
standardized. It is this very openness that has allowed for an unprecedented  
level of innovation, knowledge generation and creative expression on the Web  
and off. Those who advocate keeping the Web open do so because they want  
to continue to see these advancements. Experience shows that standardizing  
the network backbone explodes innovation, leading to more progress and  
improvements we can’t anticipate in advance.

Nowadays, for most of the time we spend online, we don’t even think about  
the strings of code and standards that bolster our daily activities. But without  
solid and interoperable layers underneath, the Web as we know it would not  
exist.

Imagine, for a moment, if you had to ask permission every time you search for  
a restaurant in your city. What if all those pieces of information came with a  
set of locks, and you had to fumble for the keys or ring your neighbor to let  
you in every time you wanted to find the program of your local theater? What  
if you had to pay a licensing fee for checking the online bus schedule?  
Fortunately, most of these interactions don’t require such transaction costs.  
That is because the supporting technical stack, the Open Web stack, already  
cleared hurdles and standardized these data exchanges.

In this book, we’ll dive into the technical backbone that makes these Web-  
based activities possible and argue why they’re important to foster and  
protect. But why should we care about the Web in the first place? What has it  
enabled, and what could it achieve if it is more open?

The following section provides examples from key disciplines and projects.  
Moreover, it offers a glimpse into a bright future of innovation and  
collaboration-if we get the technical and normative practices right.

Sharing Knowledge

Wikipedia, the darling of massively collaborative projects, turned 10 years old  
in 2011. Hosting over 10,000,000 articles spanning 270 different language  
versions,1 Wikipedia is the canonical demonstration of openness. Its  
combined cognitive output, technically and normatively interoperable and  
infinitely modifiable, propelled it into one of the most well-known bodies of  
knowledge in human history. Much ink has been spilled about the merits of  
the project, its evolution, and critiques, but for the purposes of this book, we  
wanted to underscore the value of the Web in realizing the potential of  
Wikipedia and other online collaborative projects. Wikipedia, and many other  
knowledge-building portals, rely on the Web to keep people participating and  
accessing invaluable content.

Civic Engagement

If you see a pothole on your street, you can quickly report it to the city and  
queue it for repair. The project Fix My Street2 by UK charity MySociety  
produced a web interface to improve your neighborhood through simple  
actions, such as reporting potholes. The software is released under a license  
that allows others to modify it, so other cities can adapt the technology to  
their needs. These low-barrier tools help citizens take action, flexibly and free  
of charge.

A Korean citizen journalism platform, OhmyNews, was one of the first online  
reporting organizations in the world to harness the Web to foster political  
debate and influence national politics. With over 63,000 citizen reporters, 2  
million unique users a day, and the highest rank of independent news sites in  
Korea,3 OhmyNews is an impressive example of how the Web can scale  
community-driven journalism and inform the polity. Interestingly, tip jars and  
micropayments fuel the system, bypassing the traditional ad-revenue for  
online content.

Community organizers, demonstrators, campaigners, and all stripes of civic  
lives can use the Web to further democracy and their causes. If the Web is  
open, more platforms like these will flourish. And ad-free content, especially  
in the civic sphere, will continue to be possible.

Transparency and Accountability

The battle for the Web is deeply about democracy, transparency, and voice.  
The Web provides a necessary channel for whistle blowers, citizen and  
professional journalists, dissidents or anyone really to report or criticize their  
government, employer, or other powers. If Little Brother is to keep an eye on  
Big Brother, we need secure and reliable technologies that protect the user  
and allow anonymity. The Web supports these tools, but there are dire  
challenges ahead.

The network Technology for Transparency documents case studies for tactics  
to promote transparency and accountability around the world.4 At the time  
of writing, 60 cases were available from Argentina to Zimbabwe, outlining the  
role of the Web and technologies building upon the Web, to monitor  
elections, educate citizens on consumer rights, monitor legislative processes,  
expose budget expenditures, and more. Many of these cases and innumerable  
others are made possible because of access to the Web and other key pieces  
of Free and Open technologies.

No contemporary discussion of Web-driven transparency would be complete  
without mention of the polarizing initiative Wikileaks. While the majority of  
the organization’s practices are in fact closed, Wikileaks depends on the Web  
to distribute information and communicate with its collaborators and the  
public. The debates surrounding Wikileaks expose the deep challenges to  
closing the Web. Reactions to the release of sensitive documents, especially  
the far-reaching governmental intervention to pressure private companies to  
deny Wikileaks service, reveal numerous weaknesses to commercially hosted  
services and the centralization of key Web platforms. It also underscores the  
importance of law and political influence, coupled with technical capabilities,  
to access and control information.

A notable legislative development in Iceland, in the wake of the Wikileaks  
releases, hints at the a possible evolving role of states to protect, and not  
threaten, freedom of speech. In June 2010, the Icelandic Parliament  
unanimously approved a proposal for the government to introduce a  
framework to strengthen freedom of expression, in essence leading Iceland  
towards "an inverse of a tax haven; by offering journalists and publishers  
some of the most powerful protections for free speech and investigative  
journalism in the world.”5

Creativity

The Web also fuels creativity. When the underlying technical infrastructure is  
interoperable and functioning, so much is possible on top of it. Pulling  
content from across sources, each layer compatible with open standards and  
open licenses, generates an opportunity like never before to remix and  
recontextualize art and other creative outputs.

The musicians Arcade Fire blasted the concept of online cinema with their  
release of The Wilderness Downtown,6 an interactive film using HTML5, a key  
language of the Open Web. Using live data streams and multiple browser  
frames, The Wilderness Downtown adds a dimension to the moving image  
impossible with broadcast-only technologies.

With interoperable layers of data, further experiments like popcorn.js are  
possible.7 A demo of semantic video, popcorn.js extracts feeds from a variety  
of sources, effectively allowing realtime video augmentation with data such  
as location, Wikipedia articles, social network updates, and subtitles. These  
technologies show the power of HTML5 and its potential. An Open Web  
would further these modes of expression and keep the future bright.

Education

In academia,8 the Open Access (OA) publishing movement is the vanguard  
towards removing a major barrier to distributed collaboration in science. The  
high price of journal articles effectively limits access to researchers affiliated  
with wealthy institutions. Access to Knowledge (A2K) emphasizes the equality  
and social justice aspects of opening online access to the scientific literature.

The OA movement has met with substantial and increasing success recently.  
The Directory of Open Access Journals lists over 6000 journals at the time of  
writing.9 The Public Library of Science’s top journals are in the first tier of  
publications in their fields. Traditional publishers are investing in OA, such as  
Springer’s acquisition of large OA publisher BioMed Central, or Nature’s  
creation of Scientific Reports.

In the longer term, OA may lead to improved the methods of scientific  
collaboration, e.g. peer review, and allow new forms of meta-collaboration.

An early example of the former is PLoS ONE, a rethinking of the journal as an  
electronic publication without a limitation on the number of articles  
published and with the addition of user rating and commenting.

An example of the latter would be machine analysis and indexing of journal  
articles, potentially allowing all scientific literature to be treated as a  
database, and therefore able to be queried, at least all OA literature. These  
more sophisticated applications of OA often require not just access, but  
permission to redistribute and manipulate, thus a rapid movement to  
publication under a Creative Commons license that permits any use with  
attribution—a practice followed by both PLoS and BioMed Central.

The Web has also become the ideal platform for the distribution of  
instructional, classroom and educational resources through various Open  
Educational Resource (OER) repositories and tools. In two different registers,  
projects like the Peer-to-Peer University (P2PU) and MIT OpenCourseWare  
and succeeded in providing access to university-level educational resources  
to everyone on the web.

Localization and Multilingualism

Imagine having the ability to adapt educational materials, reference works,  
medical publications, and more into all the world’s languages. Imagine  
thousands of active communities ready to localize critical tools. Imagine  
accessing websites from every corner of the world—in your language. These  
goals, once a pipe dream, are possible with today’s technologies. The power  
of openness lies in its removal of technical and legal barriers to localizing  
information and tools.

From machine translation that draws upon free corpora like Wikipedia to the  
development of fonts that display characters in languages deemed “marginal”  
by major companies, the Open Web stack enables greater opportunities to  
read information in any language, supported by open standards.

Examples of successful multilingual projects abound, but to highlight  
localization possibilities that are in particular enabled by the Open Web, take  
a look at Universal Subtitles. The service deploys standard-compliant  
software that makes it easy for anyone to add subtitles, captions, or translate  
nearly any video on the web. Its interface is simple to use, and as more videos  
are uploaded every day and as bandwidth increases the world over, more and  
more people will be communicating with video than ever before. To boost the  
reach of these videos and to engage in a truly global dialog, tools like  
Universal Subtitles are increasingly necessary. Furthermore, this project in  
particular exercises a notable privacy policy in that the videos are never  
hosted on their site; rather, when you a play a video embedded elsewhere, it  
calls up the text via Universal Subtitles. Later, if you wish to move or delete  
your video, you don’t have to clear it from a million services-just the one you  
originally hosted it on.

Platforms like Universal Subtitles, as well as many others, are showing us the  
way to a multilingual web. By allowing users to modify content and localize  
tools, more people can participate, increasing the diversity and the richness  
of the conversation.

L Size of Wikipedia. Wikipedia.

https://secure.wikimedia.0rg/wikipedia/en/wiki/Wikipedia:S1ze\_0f\_Wikipedia

1. FixMyStreet. [http://www.fixmystreet.com/](http://www.fixmystreet.com/A)[A](http://www.fixmystreet.com/A)
2. OhmyNews International, [http://international.ohmynews.eom/about/](http://international.ohmynews.eom/about/A)[A](http://international.ohmynews.eom/about/A)
3. Technology for Transparency Project, <http://transparency.globalvoicesonline.org/>
4. Icelandic Modern Media Initiative. [http://immi.is/?l=en](http://immi.is/?l=enA)[A](http://immi.is/?l=enA)
5. The Wilderness Downtown. Arcade Fire, <http://www.thewildernessdowntown.com/>
6. Popcorn.js. [http://popcornjs.org/](http://popcornjs.org/A)[A](http://popcornjs.org/A)
7. This section adapted from Science 2.0 chapter in Collaborative Futures, <http://www.col> la bora tive-  
   futures.orgA
8. Directory of Open Access Journals, [http://www.doaj.org](http://www.doaj.orgA)[A](http://www.doaj.orgA)

Your Battleground

You are the Battleground; It’s Your  
battleground.

The battle for the Web is a larger concern for all web users. This battle is not  
won nor fought on the global level. You are the battleground; it’s your  
battleground. Corporations and private interests are battling for your  
attention and focus, control and access. The near immaculate conception of  
the Open Web came from a place of ‘closed-ness’. The explosion of  
possibilities at the birth of the public internet in the mid to late 1990s began  
the fight for the open stable web, your web.

Since then, the initial waves of experimentation and growth have given way  
to corporate interests for sustaining and accessing your precious resources-  
attention and focus, time and money. However, the protocols, standards and  
software the web is built upon lower the transaction cost for you to both  
read and write what you want across the Internet. How you use your  
attention and focus, time and money, is your decision.

You, as an individual, are attempting to both read and write what you want  
on the web. Where are the lines of the battle? What rights do you have and  
how can you exercise your maximum potential?

The battle for the open web is not an abstract fight over ideas; it’s a fight so  
that you can control your technology and output. It’s about you controlling  
yourself. If you can’t control your browser, you can’t control the complete  
instantiation and clear transmission of your knowledge. If you can’t exercise  
control over your network services-the right to enter, leave and exit a service-  
you can not, with complete confidence, both access and transmit your  
knowledge.

We have excellent models for how network services, essentially web-based  
software, may be created since the largest marketshare for web browsers  
belongs to those powered by free and open source software, the combination  
of Mozilla Firefox, Google Chrome, and Apple Safari.1 Below the browser and  
desktop software layers, hidden as invisible stable infrastructure, the web is  
powered by free and open source software created by thousands of people  
around the world.

New threats have also entered this battle of openness in the form of  
inexpensive and abundant hardware, which is almost completely proprietary.  
This closed hardware has always existed, but as devices become more  
inexpensive and integrated, companies such as Apple are producing magical  
locked down devices, an accelerating integration of hardware and software,  
that won’t allow you to control yourself. Content must come from  
commercial online stores, and deeper access to devices is thwarted through  
proprietary technologies.

If you can’t control the software on your devices, the actual devices  
themselves, or the network services that are the applications on new mobile  
networked devices, you cannot win the battle for the open web. Your choice  
plays an enormous role in the future of the open web.

L <http://en.wikipedia.org/wiki/Usage_share_of_web_browsers> Note however that only Firefox is completely  
open source. The core technology used by Chrome and Safari (WebKit) is open source, but Chrome is a  
proprietary wrapper (a fully open source version called Chromium, is available), and Safari is proprietary  
with the exception of its open core.

Your Rights and Freedoms

While many of us come to take convenient and reliable Internet access for  
granted, there is a great disparity in access dependent on socioeconomic and  
geographic factors. Getting connected and the 'right to access' is a big issue  
in itself and the subject of much debate. Recently, some governments are  
taking a stand to support Internet access as a basic principle for its citizenry-  
almost or explicitly stated in terms of rights. In 2009 for example, Finland  
passed a law guaranteeing every person in the country 1 megabit broadband  
access. Moreover, the European Union acknowledges the right to freedom of  
expression and information, often interpreted to cover access to the internet.

In the U.S.A,Jeff Jarvis in his Bill of Rights for Cyberspace argues, "We  
acknowledge the limitations on freedom of speech but they must defined as  
narrowly as possible, lest we find ourselves operating under a lowest  
common denominator of offense. Freedom is our default."1

Conversely, numerous governments like France’s threaten this choice with  
laws like HADOPI, which at first drafting mandated a restriction of internet  
usage upon mere accusation of copyright infringement. Without judicial  
review, the government could remove a citizen's ability to enter the public  
sphere of the Web, not to mention carry out crucial activities there such as  
voting, paying taxes, and in general engaging in the polity.

While these are very interesting topics and there are many interesting sides to  
the debate about 'the right to access', we see this as a topic for another book.  
While we believe the Web has a positive utility and we hope as many people  
as possible can access the Web if they choose, we want to restrict our  
arguments to what happens 'within' this online space.

Control of Your Information

On the Web we can take action along a spectrum; sometimes our activities  
are very low-barrier and simple, such as viewing a webpage or repeating a  
message. Other actions require higher levels of engagement and resources.  
This spectrum of participation is yours to control, and we believe the personal  
information you pass along the way is yours to give and take as you choose.

In this section, we'll touch on privacy, anonymity, and data portability-  
important aspects for controlling your information and participation.

Let's start with an example. There is a dissonance between the general  
"sharing" functionality of social networks and the privacy settings of these  
networks. Ifyou select your privacy settings to permit friends of friends to  
see your information, that means friends decide with you who is going to  
have access to your information. Or, ifyou share a link on a friends profile,  
that friend is going to decide with you who is going to see that information.  
This means that sharing in social networks is a collaborative activity.

However, setting your privacy "preferences" is an individual action.

Facebook, one of the largest social networks at this time, offers the the  
following privacy policy: WE want YOU to have CONTROL over YOUR  
INFORMATION. However, to manage your privacy on Facebook, you will need  
to navigate through 50 settings with more than 170 options to tweak it to  
your preferences.

Facebook tells us that we individually own, control, and protect our data on a  
collaborative sharing space. On the other hand, Facebook collects all sorts of  
information about you from other sites and applications. They also share this  
data with third parties. And they do not let you fully control this. It is exactly  
such discrepancies that have to be worked out In a future web.

This battle doesn't end with merely the sharing of photos or statuses on  
social networks. Many users online are deeply concerned about protecting  
their identity. It is relatively easy to Implement the technical means to avoid  
being identified, whateveryour reason may be. You should have the choice to  
use the Web anonymously and to be aware of how services collect and use  
your data. You also have the choice not to participate.

Lastly, data portability Is an Important issue as It allows you an essential  
control lever. You should have the ability to back up your data or share your  
data with other users, software, or online services.2 It's your data after all. A  
network service should provide users the ability to move their data in a  
format that Is as open and compatible as possible with other software and  
services.

Contemplating the future of privacy, anonymity, and data portability online,  
Evan Prodromou asks, "Can we make working on network services more like  
visiting a friend's house than like being locked In a jail? Time will tell whether  
we can craft a culture around Free Network Services that Is respectful of  
users’ autonomy, such that we can use other computers with some measure  
of confidence."

Exit

We also believe YOU SHOULD BE ABLE TO LEAVE an online service or social  
network AT ANYTIME. Many online services make it difficult for you to delete  
your account, while others do not allow you to leave at all. Exit is a very  
important feature for social networks on the open Web, not just as a matter  
of courtesy, but for other more tangible reasons. For example, it is easy to  
understand why it should be easy for anyone to delete their account if they  
feel this information for whatever reason puts them at personal risk.  
However, many social networks do not facilitate your ability to leave. In fact,  
their business models rely on accumulating accounts and user data.

Within the menu system of Facebook you can deactivate your Facebook  
account but not delete it. Deleting is possible, but it is not obvious how you  
do it. If you do manage to deactivate your Facebook account, all your  
Information is still saved on the company's servers. Facebook positions this as  
if they are doing you a favor, just in case you later decide to re-activate your  
account. To re-activate your account you simply log in again, and everything  
will be just the way you left it.

The good news is that you can delete you account. But finding out how is not  
easy. Also, as more and more services implement Facebook Connect as their  
way to authenticate users, you build up reliance on this integrated system of  
closed services, and you can find it very difficult to leave indeed.

The inability to easily remove accounts has forced some unusual exit  
strategies, largely artistic, but with real world consequence.3 But we  
shouldn't have to go this far and commit virtual suicide. Leaving should be  
easy, it should be in your hands, and you should be able to decide what you  
take with you and what you leave behind.

L <http://www.buzzmachine.com/20i0/03/27/a-bill-of-rights-in-cyberspace/>

1. Google's Data Liberation project offers an interesting example of data portability. Their policy states,  
   "Users should be able to control the data they store in any of Google’s products. Our team's goal is to  
   make it easier to move data in and out." <http://www.dataliberation.org>
2. The Web 2.0 Suicide Machine and Seppukoo.com are artistic viral suicide services based on the most  
   popular social networking website, Facebook although they also work for Twitter, Linkedln and MySpace  
   accounts. Both services use slightly different strategies to 'kill' an account. Both Seppukoo and the Suicide  
   machine have faced legal consequences for their actions. Facebook sent a cease and desist letter to both  
   for their efforts, <http://www.seppukoo.com/docs/seppukoo_cease_desist.pdf> and  
   <http://suicidemachine.org/download/Web_2.0_Suicide_Machine.pdf>

The Browser and Web are Magic

The browser is your interface to the Web, and the Web is your interface to  
global knowledge. The browser handles the retrieval, presentation, and  
traversal of content,1 primarily from the World Wide Web. At a minimum, the  
browser is a tool for accessing global knowledge in the ether. But together,  
the browser and the Web are magic.2 Computers without Internet are useless  
dumb bricks.

The rapid increase in network speed, the decrease in cost of manufacturing  
hardware, and cheap internet access are pushing this form of web magic onto  
mobile devices-from netbooks, to mobile phones, to tablet computing. These  
devices are browsers. The battle for the Web is dependent upon you having  
control over the browser and demystifying the entire stack mediating  
between your consumption and production of knowledge, your  
communication with other people. Thus, we tackle first the traditional form  
of web browser, the browser as virtual software.

Since the first web browser, World Wide Web (Nexus), written by Tim  
Berners-Lee in 1991, the one of the most rapidly developed software types has  
taken many forms: from black and white text-only presentation like Lynx to  
non-visual braille browsers3 all the way to an over-bloated full groupware  
suite, Netscape Communicator. The options for a browser are as bountiful as  
you have time to download them.

However, the past browser warz have taught us that there are features which  
support individuals better. While the browser warz are beyond the scope of  
this book, it is crucial to understand that browser development not only  
defines how you can access the Web, but the browser is becoming the  
operating system on future devices. Browsers are, by no fault other than our  
own, becoming the default software application on new devices.4 For this  
book, we will look at the top four browsers, ranked in terms of market share:  
Internet Explorer, Mozilla Firefox, Google Chrome, and Apple Safari.

The Big Four

The largest browser, in terms of market share, is still Internet Explorer (IE). It  
won the first browser war, but by today it is notorious for bad security,  
partial support for standards, and closed strategies. With massive support  
behind it in cash money from Microsoft, IE is king in the largest markets in the  
world, USA and China. After auto-distributing IE downwards onto Microsoft's  
dominant operating system platform, Windows, IE crushed the rest of the  
competition.

In the late nineties, as Microsoft's Internet Explorer rapidly gained more users,  
Netscape came up with a strategy to release their source code In order to  
harness the power of the pre-existing Free Software Movement, which  
advocated software freedom5. Since Netscape couldn't get more people to  
use their browser, and didn't have the huge budget that Microsoft  
strategically pummeled competitors with, Netscape decided to release the  
source code and do a community marketing blitz with coining the term Open  
Source6. This strategy allows for sharing software freely and legally and for  
any changes to be released to the public for community benefits. Netscape  
released their browser code into the Mozilla community project over time (in  
a very long ongoing story too long for this book). Mozillians, the funny  
community name for Mozilla supporters, aligned with this approach to  
attract more business users, and fought back to gain about 30% of the global  
browser market share from IE at the end of 2010. This Is the dominant OPEN  
browser. It has better security, supports standards, and localization for people  
around the world.

Meanwhile, as Steve Jobs re-ascended to Apple’s throne, having gone through  
purgatory to learn about content strategies from Pixar and Disney,7 he re-built  
his Apple empire, the forbidden fruit of computing, on the Free Software  
stack. He took a diamond in the rough, recast it as WebKit from the Free  
Software desktop KDE,8 polished it off, and named it Safari. This technology is  
now at the center of Apple devices, from their desktop, to the iPhone to the  
iPad. To expand upon this critical strategy, Google also built their new  
browser off of the Open Source WebKit technology, calling it the faceless, but  
fast, Chrome.

Choosing a Browser

At the birth of the Web, basic standards existed to govern the "get and put" of  
information between a browser (client) and a server. With the explosion of  
new web browsers, the lack of standards between the browsers provided a  
bad experience for website operators hoping that people viewing their sites  
could have the same experience. Also, we learned that corporate interests  
from Netscape Navigator and Microsoft Internet Explorer would exploit the  
lack of standards to force more people to use their products to have a more  
consistent experience. The more people who used a browser, the more likely  
the consistency of the collective experience. One of the worst examples of  
this is the <bIink> tag, created by Netscape.9

In selecting a browser, it is important to consider how healthy a browser  
project and its sponsors are in keeping the project alive. At the beginning of  
the first browser war, Microsoft dominated the other browsers with huge  
advertising and marketing budgets. Now, Google pumps loads of capital into  
the rapid development of its new Chrome browser, while it also pays many  
millions to Mozilla every year for using Google search as Mozilla Firefox's  
default search option. Remember. The top browsers are spending loads of  
cash on gaining more users and making their browsers best for you. They  
want to remove any objections for you to not use their browser.

You can make a difference in the battle for the open web by choosing a  
browser which:

* Is Free and Open Source Software;
* Has a healthy community ecosystem supporting its continued  
  development and growth;
* Supports Open Web standards;
* Rapidly fixes bugs, and explores features, relating to user security and  
  privacy.

Still the dominant browser in the world is Internet Explorer, but after several  
browser wars and the continued success of the Free/Open Sources Software  
movements, the combined marketshare of Mozllla Firefox, Apple Safari, and  
Google Chrome is more than Microsoft's Internet Explorer.10 And, importantly,  
this has forced Internet Explorer to play by the rules more with open  
standards. Now, you can select a browser which allows you to maximize your  
potential actions and help win the battle for the open web.

While the authors of this book have tried to provide options that support  
your autonomy, to fight the battle for the open web, your major choice for a  
browser is between Mozilla Firefox and Google Chrome. The WebKit engine  
that powers Apple's Safari is Open Source, however other parts of Apple's  
interface is proprietary. You cannot control it and see what is actually inside  
of the software. Oddly enough, this is called chrome in software lexicon,  
meaning the visual elements around the Invisible engine, WebKit, which  
delivers the web to you.

Many consider Mozilla Firefox the best Open Source web browser because it  
has by far the largest community of developers, both volunteers and  
employees paid by Mozilla Corporation. Also, it is one of the largest advocates  
for the Open Web. The sole shareholder of Mozilla Corporation (MoCo) is the  
nonprofit Mozilla Foundation (MoFo). Therefore, Mozilla projects will never  
suffer the fate of some open source projects, where the corporate sponsor is  
bought out by an open-source-unfriendly company. A potential threat to  
Mozilla is that it is reliant upon its competitor in the fight for the best  
browser, Google, which writes checks to Mozilla from a renewable search  
deal. However, many from Mozilla will say they have $100 Millions USD in a  
savings account in case Google starts acting funny. Another weakness is that  
Mozilla is still holding onto some infrastructural baggage that Google Chrome  
has jettisoned with a more closed form of development, but with a huge  
budget and focus on speed, speed, and more speed. At the time of this book,  
the release of Mozilla Firefox 4 is several months later than expected, while  
Google Chrome understands the public realidad and perception of need for  
speed in continuously releasing Chrome 6, 7, 8, and 9, in rapid succession.  
Plans are afoot to move Firefox releases to a similar schedule, with Firefox 5  
arriving later in 2011.

In terms of security, privacy and standards, Mozilla Firefox has taken the  
biggest stand that is outside the boundaries of Google's slurping and  
analyzing of massive personal information from the Internet. With Google's  
search spidering of the Internet and massive cross-wiring of public facing  
services, another path to putting advertisements in front of more clicking  
fingers,11 even though Google provides options to not tie its Chrome browser  
to your accounts on Google, the whole browser works better if you do let it  
synchronize with the mothership.

In your battle for the Open Web, you must decide right now if you want a  
browseryou control completely, Mozilla Firefox, or one which is fast, but  
could compromise your autonomy, Google Chrome. From a competitive  
vantage point, the more slow development of Mozilla Firefox appears chaotic  
sometimes and not focused on "winning" as the dominant browser. This also  
may be viewed as a strength as Mozilla supports more people globally and is  
the largest Open Source browser by market share. Sometimes gaining a  
consensus and receiving more contributions slows development, insuring a  
form of stability that military-style Google Chrome development exemplifies.  
The battle for the Open Web is more slow than one might be led to believe  
with the urgency of words in this book or number of advertisements placed  
on bustops. Remember. Mozilla Firefox has emerged from multiple browser  
warz over a number of years as the dominant browser fighting for the open  
web and supporting autonomy.

1. [http://en.wikipedia.org/wiki/Web\_browser](http://en.wikipedia.org/wiki/Web_browserA)[A](http://en.wikipedia.org/wiki/Web_browserA)
2. I dare not quote the most quoted essay of all time by Walter Benjamin, "The Work of Art in the Age of  
   Mechanical Reproduction." However, its foundational concepts and context of writing this book in Berlin  
   are felt. Das Kunstwerk im ZeitaIter seiner technischen Reproduzierbarkeit See  
   <http://en.wikipedia.org/wikyThe_Work_of_Art_m_the_Age_of_Mechanical_Reproduction> and  
   [http://www.arteclab.uni-bremen.de/~robben/KunstwerkBenjamin.pdf](http://www.arteclab.uni-bremen.de/~robben/KunstwerkBenjamin.pdfA)[A](http://www.arteclab.uni-bremen.de/~robben/KunstwerkBenjamin.pdfA)
3. [http://mozbraille.mozdev.org/](http://mozbraille.mozdev.org/A)[A](http://mozbraille.mozdev.org/A)
4. Essentially, we are implying they are becoming the operating system.A
5. The Free Software movement is discussed in more detail in our chapter "Software is a Global Interface to  
   Hardware.,,A
6. A summary of this jump from Free Software to Open Source essentially meant that Free Software  
   ideologies and people confused the business world with the use of "Free" and "Software" together. The  
   primary people from the Free Software movement were not part of the decision to recast the sharing of  
   source code as "Open Source," also an attempt to separate the fervent long beards from those trying to  
   grow Free Software to larger markets.A
7. [http://www.businessweek.com/magazine/content/06\_06/b397000l.htm](http://www.businessweek.com/magazine/content/06_06/b397000l.htmA)[A](http://www.businessweek.com/magazine/content/06_06/b397000l.htmA)
8. [http://en.wikipedia.org/wiki/WebKit](http://en.wikipedia.org/wiki/WebKitA)[A](http://en.wikipedia.org/wiki/WebKitA)

9- [http://en.Wikipedia.org/wiki/Blink\_tag](http://en.Wikipedia.org/wiki/Blink_tagA)[A](http://en.Wikipedia.org/wiki/Blink_tagA)

10. However, Open Browsers combined market share dominance is not the problem now. The battleground  
has moved to controlling your attention and focus. The browser is not just software, the browser is an  
integration of hardware and software. And, Apple, the second largest company in the USA and the  
world's largest technology company in terms of market cap are leading the lockdown integration of the  
mobile device, an integration of software and hardware, with Google fighting for the open web through  
its Android as the integrated browser on hundreds of manufacturers devices globally. Yet again, you are  
the battleground, how can you battle for accessing others and transmitting your knowledge?A

n. Or, are they russian botnets: [http://en.wikipedia.org/wiki/Botnet](http://en.wikipedia.org/wiki/BotnetA)[A](http://en.wikipedia.org/wiki/BotnetA)

Content is Your Knowledge

One either shares their knowledge or hides it from others. Sometimes this  
sharing or hiding happens consciously or unconsciously. There are instances  
where both sharing and hiding are useful strategies. For the Open Web, the  
concepts of sharing of knowledge have been built into the fiber of websites  
and services since the early Web, what we often refer to as Web l.o. Sharing is  
a refreshing change from the isolation on one’s computer off of the Internet,  
or in using certain non-social aspects of the web like consumption of media.  
However, it’s important to note that sharing is not necessarily the default  
state of most of the Web.

The original Web, built on the Internet, defaulted to public display of HTML  
pages between colleagues at universities. With the boom of the public web,  
specifically from 1994-1997 onward, the explosion of people actively online  
increased exponentially.1 Since then, the Web has rapidly changed from a  
default of public homepages to services and businesses developing  
applications that allow for varying public and private controls on your  
participation. The sharing of your knowledge and access to others’ knowledge  
has been regulated either through strategies of lock-down by the proprietors  
of webpages, or legal enforcement in jurisdictions around the world. Even the  
ability to view source only allows forking or basic copying of content on the  
internet and not the changing of that original content by default.

Today, with sites such as Youtube, Flickr, and Twitter, people can both read  
and write on websites with varying levels of access and control. The new  
battlefield for reading and writing of information has to do with what a  
person is allowed to share on a website. On a range of services, sharing daily  
is default, hence the massive amount of information shared by people to their  
networks on Facebook and via status update services like Twitter and  
Status.Net.

However, not everyone in the world uses the same strategy of sharing. For  
this book, we will make the distinction between sharing knowledge in  
general, and sharing which requires a legal fix, through Creative Commons  
and other copyright licenses to allow for legal sharing.

Sharing Nicely

The land grab on creative works by copyright gave shape to a world where  
upon the instant you create a creative work-such as audio, video, image, or  
text-the work is restricted by copyright. The need to register that work with  
a government agency is not required. This means that most creative works in  
countries that abide by the Berne Convention are locking-out sharing by  
others by default. First world sharing is broken. It is failed sharing.

One solution to this failed sharing for content is Creative Commons, a non-  
profit which provides free legal tools that allow a copyright holder to share  
some rights with others.2 For software source code, there are legal hacks  
from the Free Software Foundation, which provides the GNU General Public  
License (GPL). The GPL pioneered the copyleft method of fixing broken  
sharing, is the dominant free software license today,3 and inspired the  
Creative Commons Attribution-ShareAlike license, also copyleft, and the most  
frequently used free license for content.

This human-made problem of copyright came from a place of protectionism.  
Corporations such as Disney perverted the duration of copyright’s term to  
essentially live forever in a form of corporate trans-humanism,4 cheating  
death unnaturally forever by exacting profit from enforcing artificial scarcity  
indefinitely.

The battle for the Open Web requires both more sharing and also fixes like  
Creative Commons.

Limits and Challenges to Sharing

Nevertheless, sharing has limits. There are loads of instances around the  
world where sharing has issues. There is not a perfect share or system. The  
battle for the Open Web is a shifting social, legal and technical landscape.

Consider for a moment a personal anecdote about oversharing of content on  
Facebook. A friend of the authors used the Web to share his travels on  
tripit.com, a service that by default shares your status on Facebook. Our  
friend, who lives in an Arab country at war with Israel, shared that he would  
be making a trip to Asia. Someone else, not even an acquaintance of our  
friend, commented on the automatic update to Facebook’s public stream  
saying, “Hope to see you soon in Tel Aviv!” The secret service intercepted this  
message, not by some grand technological means, but merely because the  
status updates are public. Our friend spent the next two days in a jail cell—for  
his one update. Sharing is not always a positive experience, if its unconscious  
or misused by others.

One of the best examples of why real sharing works is the top five ranked  
website in the world, Wikipedia. This massively community edited  
encyclopedia thrives with the principle that everyone is an expert, anyone  
may edit the encyclopedia. This is legally reinforced by using the legal fix to  
sharing, the Creative Commons Attribution-ShareAlike license. Let us take for  
example the article on Inkscape, the Open Source drawing  
tool: <http://en.wikipedia.org/wiki/lnkscape>. If we look at this complete article,  
it lists what the software does, the history of the project and reference  
material supporting claims. At the top of the page you can click on the history  
of the article and see thousands of edits. The history of the sharing of  
knowledge between thousands of people around the world increases the  
article's strength. This isn't under or oversharing, rather just the right amount  
of sharing.

The battle for the Open Web is about you controlling yourself. It’s about you  
being responsible foryour own forms of sharing. While some might advocate  
“loving to share,” it can have the adverse effects. With the default copyright  
system in all developed countries (with spread of its enforcement to the rest  
essentially locked-in through treaty and pressure from internal and external  
rent-seekers), undersharing is rampant. Its also possible to overshare, both  
without your consent or in the case of those who choose to become  
spammers, they actively overshare. For the open web, sharing is necessary to  
combat the massive knowledge hiding that is part of the legal and social  
norms globally.

As scholars have shown numerous times and author Cory Doctorow has  
fantasized about in “Down and Out, in the Tragic Kingdom,”5 the future is  
built upon the past. A past of public domain, free creative works. Our  
collective history. Disney built its empire on taking public domain stories from  
the past, creating decorative animations to some songs, syncing some voice-  
overs to explain these stories, and then created a system of artificial scarcity  
in order to generate profit. However, you cannot freely participate in Disney’s  
empire without paying a price. This same model of locked sharing transfers to  
countless examples on the web, from Amazon Store to Apple's ¡Tunes store  
which sells Disney videos, Pixar animations, and countless soundtracks, to the  
artist again known as Prince, suing his fans uploading videos to Google's  
Youtube,6 first-world copyright is often enforced when money is not being  
collected maximally. In this model, the sharing you are allowed to do is  
provide your credit card number.

In the Open Web, there are rays of hope for a more balanced sharing.  
Wikipedia and the huge success of Web 2.0 sites like Youtube show that  
people want to share. Over 24 hours of HD video is uploaded to Youtube every  
second.7

In the battle for the Open Web, the solution is to support legal sharing with  
Creative Commons and other Free and Open licenses. If done right, like  
Wikipedia, just the right amount of sharing can change the world.

1. [http://en.wikipedia.org/wiki/History\_of\_theJnternet](http://en.wikipedia.org/wiki/History_of_theJnternetA)[A](http://en.wikipedia.org/wiki/History_of_theJnternetA)
2. See [http://creativecommons.org/](http://creativecommons.org/A)[A](http://creativecommons.org/A)
3. “Make Your Open Source Software GPL-Compatible. Or Else." by David A. Wheeler.  
   <http://www.dwheeler.com/essays/gpl-compatible.htmr>
4. Let's call this trans-corporism.A
5. See <http://www.thepublicdomain.org> and [http://craphound.com/down/](http://craphound.com/down/A)[A](http://craphound.com/down/A)
6. See <http://www.switched.com/2007/ll/07/pnnce-sues-his-number-one-fans/> and  
   <http://www.gua> rdian.co.uk/uk/2007/nov/07/musicnews.topstories3A
7. See [http://mashable.com/20l0/03/l7/youtube-24-hours/](http://mashable.com/20l0/03/l7/youtube-24-hours/A)[A](http://mashable.com/20l0/03/l7/youtube-24-hours/A)

Hardware is Physical Software

The division between hardware and software is a tale about the mechanical  
apparatus that extends our human technologies. Hardware is the physical  
interface that allows you to manipulate reality with more control than your  
standard human technology: arm, leg, leg, arm, head.

Traditionally, when we think of hardware, we think of the expensive  
computers we buy at a store. We take them out of the box, plug them in, and  
we double-click a web browser to interface with Web. This Is browser/web  
magic.

Competition

There are thousands of hardware devices which allow for us to access the  
Web: from desktop computers, portable laptops, mobile phones, netbooks,  
and now tablets. And, these devices all run some form of software, often a  
generic and virtual Interface we are used to, that lets us access and transmit  
our knowledge around the world.

The battle for the open Web Is a battle for the the individual. It’s a battle for  
your attention and focus, your time and money. Hardware purchases are one  
of the greatest expenditures people make today. You make the purchase with  
more consideration than the decision of switching browsers or sharing a  
status update. Buying hardware locks you into a culture for a longer period of  
time than our flippant changing of software and sites.

With the rise of cheap mobile devices, the increase of network speeds, and  
decreasing costs of internet access, the battle for the Web is a corporate  
battle for your pocket book, controlling how you useyourtime, and whatyou  
can consume.

Whereas the battle for the magic of Web browsing played out between  
Microsoft and the “rest”, the battle for the open Web Is played out between  
Apple and Google. Mozilla and Microsoft, David and Goliath, don’t get it in  
this battle. They are supporting actors. Amazon is slowly getting there, but  
not for this battle.1 Apple Is a completely vertically integrated company that Is  
both removing the web from its iPhone and tablet iPad in place of custom  
applications that developers must submit to the corporate headquarters for  
provisioning on devices. Total control.

Now Google, building upon past Free Software and Open Source strategies, is  
creating an open source operating system, Android, which any hardware  
manufacturer may use on their platforms. Other companies that aren’t cool  
can now simply install Android, design a theme, and join the 2ist century.

Accelerated Integration

Both Apple and Google’s strategies are dependent upon the accelerating  
integration of hardware and software layers of the browser. For Apple, the  
more they can control the hardware and software layers of a device, the more  
devices they sell and the more they can control what is sold. Free has no  
place on Apple’s devices. Even the developers who make their devices have to  
pay $99 a year to be able to participate in the grab foryour attention. Nothing  
is free.2

For Google, they play the cool open guys with free hot lunches for employees.  
Segways for everyone! The more of the Internet that is free and open, the  
more Google ads can be placed on the net, sending more money into their  
pockets. Google needs you. It needs the Open Web.

With Apple products and software, we are back into bed with time-tested  
monopoly like from the Microsoft era. This time Apple has a complete  
monopoly on content and hardware. Integrated products are cheaper to  
manufacture; they appear like magic and just work. Provisioned applications  
function, but they are not the Web. The world at the close of 2010 is one  
where Apple controls what can be placed onto their devices, the batteries are  
sealed into their new products, and sales for their non-computers-iPhones,  
iPods and iPads-are through the roof. One day, Apple could simply remove  
their web browser because they say no one uses it. Could you envision a  
future where the Wikimedia Foundation, the company that keeps Wikipedia  
alive, is required to pay $50 million a year so that anyone may access free  
knowledge on the Apple’s iPad 4? It is completely possible with the  
accelerating integration of software and hardware into the ultimate browser  
of the closed web, the iPad-a consumer’s ultimate forbidden fruit. Modularity  
is dead.

The opposite strategy is propagated by Google, the nerds next door. Success  
through metrics they say. While Google built their browser, Chrome, on the  
same standard technology Apple uses at the core of its application layer,  
Webkit (Apple Safari in its application form), Google is battling Apple by  
getting installed on more devices faster. The more open the Web, the more  
ads on that openness. The more public spaces, the more you can see those  
ads from the streets.

Apple wants you to buy more stuff, and Google wants you to click more ads.  
It’s your battleground though: what hardware will let you control it and allow  
you to fight for the open Web? This is one of the weakest battlegrounds in the  
fight for the Open Web. Both the fight for the Open Source browser and a  
new fight to create free and open hardware is afoot. New projects are on the  
horizon including the simple Arduino microprocessing project board that is  
spreading globally like wildfire.3 Also, there is the more complete and pure, in  
a Free Software sense, Copyleft Hardware movement led off by the Qi  
Hardware4 project attempting to release all plans and software necessary to  
both make and use hardware. Your fight for the open web cannot stop at the  
articificial boundary between software and hardware.

Until the hardware that connects with your human technology is completely  
free, in a Free Software sense, the battle for the Open Web cannot be won.

1. [http://neteffect.foreignpolicy.com/posts/2009/i0/07/amazon\_goes\_global\_sort\_of](http://neteffect.foreignpolicy.com/posts/2009/i0/07/amazon_goes_global_sort_ofA)[A](http://neteffect.foreignpolicy.com/posts/2009/i0/07/amazon_goes_global_sort_ofA)
2. [http://www.pcworld.com/article/194318](http://www.pcworld.com/article/194318A)[A](http://www.pcworld.com/article/194318A)
3. See [http://arduino.cc/](http://arduino.cc/A)[A](http://arduino.cc/A)
4. See [http://qi-hardware.com/](http://qi-hardware.com/A)[A](http://qi-hardware.com/A)

Software is a Global Interface to  
Hardware

A quick hypothetical story: Your favorite operating system is Windows Vista,  
you want to install it onto your new Apple iPad. You can’t. There isn’t even a  
USB port or a place to install non-Apple sanctioned software from its app  
store. But, you love Windows Vista and want it to be your interface to the  
new hardware you purchased. You love the latest Internet Explorer, but can’t  
even install it. You don’t have the choice. You can’t Think Different™.

Software is a virtual interface to manipulating knowledge. That software is a  
global interface to the physical hardware that you interface with through  
your human technology.

Free Software

Have you ever heard of Free and Open Source Software? Free Software is  
software that is licensed by software licenses to allow for sharing of software  
and its development between people. It is a fix for failed sharing. Richard  
Stallman founded the Free Software Foundation and produced the dominant  
license for the Free Software Movement, the GNU General Public License, to  
give back permission to the public as the reciprocity of sharing.

Since October 4,1985,1 the Free Software movement’s contribution to the  
open Web are some rules of combat beyond the licenses. It has codified the  
four freedoms. It states that you should, for any piece of software, 0) have the  
freedom to run, 1) study and change, 2) redistribute and improve, and 3) give  
back those changes to the community. These simple rules allowed for the  
open Web to grow on solid ground. The invisible Internet is powered by Free  
Software.

The most common Free Software operating systems are based on Linux.2Linux is an operating system kernel that powers the Web, and on the desktop  
is the most common global virtual interface for most types of hardware-from  
phones, to computers from the 1990s, to the largest supercomputers in China  
and the USA, Linux is on the most different types of computers in the world.

It is the standard interface to all different sorts of computers.

Stable Foundations

Foryou, in your battle for the open Web, this is an important distinction to  
consider because the more closed the software, the less types of hardware  
you can install your favorite software onto, the less ability you have to  
maximize your knowledge and access.

Beyond the discussion in this book, it’s important to note that the hidden part  
of the Internet, the invisible faceless infrastructure of the web, is Free  
Software. The browser, the dominant interface for the web is Free Software; it  
is the combined shared source and communities of Mozilla Firefox, Apple  
Safari, and Google Chrome. The browser is the stable ground which both  
network services and the Web 2.0 startup revolution emanating from San  
Francisco is built on. The browser is becoming its own operating system as  
Google releases Chrome OS, a browser-based operating system.3

Also Apple, leading the vertically-integrated computing revolution, is built  
upon Free Software. The core of this is their forked BSD, aptly called Darwin.  
The app store and the innovation that application developers rely upon is  
built upon this stable foundation of Free Software. Apple has made famous  
the millions of application developers who have been lured to the dark side of  
development, one in which money and the open Web must be handed over in  
order to get a piece of the money pie lock-in.

App Stores

The truth is that few eat like kings in the app store, but the lure of a feast is  
too much in the drought of a down market. The app store, essentially a  
marketing distraction for those that want to compete with Apple, yet a  
complete lock-in strategy for developers who might gain freedom by  
developing for multiple platforms, promotes the closed web.

Applications from the app store are not global interfaces to hardware. When  
only one company supports software limited to their vertically-integrated,  
subscription-based computer leasing, product-upgrade strategy, this is not  
open. Apps are one of the biggest threats to the Open Web today, with their  
lack of support for the Free Software’s four freedoms upon which Apple has  
built its empire on. Apps lack of support for the standard interface of the open  
source web browser. Even the name of Apple’s web browser, Safari, conjures  
up that the Web is a jungle, not safe enough for the average consumer—only  
developers and adults for now.

The battle for the Open Web requires awareness that your attention and  
focus, time and money are up for grabs. You are the average consumer to  
them. The less you make decisions for yourself, to actualize your knowledge  
completely, successfully transmitting and receiving content to other people,  
the more passive you become. With each l-click-buy-it-now in the apps store,  
the more closed the Web becomes.

L <http://fsf.org> and <http://en.wikipedia.org/wiki/Free_Software_Foundation>

1. Most operating systems with a Linux kernel are currently CNU/Linux, though in the future the majority  
   may be Android/Linux, but we don’t want to confuse our readers here at this point:)
2. <http://en.wikipedia.org/wiki/Coogle_Chrome_OS> is soon to be released. It should be noted that while  
   Google appears to be compliant with the Free Software Movement, others have pointed out that software  
   code released by the company is out of date, the larger community is not truly allowed in on the process  
   of development in a timely manner, and some questionable coding practices are persistent in Coogle's  
   practices. Google should be applauded however for taking the lead on the Open Web. Another instance of  
   this OS strategy is Android which has both free software and proprietary binary blobs of code on-top of  
   the Linux kernel.A

Network Services Connect People

So far we have defined some of the battleground for the Open Web and a  
strategy for the battle tilted towards you controlling yourself. Let’s look at the  
actual services that connect together people on the open Web.

Blackbox Services

While you can communicate with others directly on the Web, the current  
trend is for services that act as hubs. In the early days of the Web, email,  
instant messaging, and web browsing were controlled by a single person on  
their computer. Sharing and participation were controlled by you. Now we  
use Facebook, Google Apps like GDocs, Twitter, and countless other services  
to do a form of group computing. These private websites provide black boxes  
which require our participation.

As identified in the last chapter, the invisible software infrastructure of the  
Internet and Web is built upon Free Software. Likewise, all majorweb  
applications used today are built upon Free Software technology successes.  
But they support neither the code nor community practices of Free and Open  
Source Software development. Since we have established that the desire for  
the Open Web is a desire foryour own autonomy, a battle foryou, the open  
web cannot be free until the application layer Is also Free, as in Free Software.

Yourbook

Facebook is but a piece of software that runs on the GNU/Linux operating  
system with thousands of servers working together in some super-secure  
data center in an nondescript building that allows you to connect with your  
people. Facebook is not Free Software. One does not have the freedom to run,  
study and change, redistribute and improve, nor give back changes one wants  
to make to any community. Rather, all you are allowed to do is enter,  
participate and (sort of) leave Facebook.

Facebook can never be Yourbook. Facebook provides forms of data portability  
foryou, but if you want to use this service, you must use their standard  
application programming interfaces (API). This is not Free Software nor is it  
Open Source. It is NOT Open. APIs are controlled by Facebook and may  
change at any time. APIs are fauxpen, fake open.

Facebook is the darling of the web startup scene. Neither haircut, fixed gear  
bike, nor any amount of forbidden fruit seems to change the web startup  
culture built upon minnovation (minimum-innovation). Built on Free  
Software, locked applications and proprietary stealth development chart the  
course of the current Web.

Free Network Services

However, network services are different from Free Software. Many including  
Free Software Foundation’s Benjamin-Mako Hill and Tim O’Reilly from O'Reilly  
Books argued at OSCON in 20091 that Free Software is computing where you  
control your own technology. Network services are a form of group  
computing. It takes some rethinking how to apply the same principles of Free  
Software to make a Free Network Service.

In the earlier section “Your Rights and Freedoms,” we outline some principles  
that allow you to make the choice to fight the Open Web. Fighting for the  
Open Web also requires fighting for Free Network Services. It’s a fight for a  
healthy ecosystem not just yourself, but for all autonomous individuals to  
share and communicate clearly. This battle is for people working together to  
make federated systems.

In March 2008, many leading advocates including Evan Prodromou of  
Status.Net, Mike Linksvayerfrom Creative Commons, Mako-Hill from FSF,  
Bradley Kuhn from Software Freedom Law Center came together in Boston to  
find a path forward in the battle for the open Web. The picture painted was  
bleak. All of the top 10 website, save for Wikipedia, had the ability to commit  
great disservices to the freedoms of the average web user on-demand.2 In  
almost every category, the autonomy of individuals on the Web is at risk. As  
Benjamin Mako-Hill points out:3

“The current generation of network services or Software as a  
Service can provide advantages over traditional, locally installed  
software in ease of deployment, collaboration, and data  
aggregation. Many users have begun to rely on such services in  
preference to software provisioned by themselves or their  
organizations. This move toward centralization has powerful  
effects on software freedom and user autonomy.”

From this meeting in Boston emerged the Franklin Street Statement (FSS) and  
the Autonomo.us project, working towards a definition of what is a Free  
Network Service. Possibly still too early to define completely, a Free Network  
Service is generally one that chooses to release software for the service under  
a Free Software license and allows a user to control her data. Arguable more  
important for the ecosystem is to consider recommendations for supporting  
that ecosystem.

In your battle for the Open Web, it is important to consider what services are  
Free Network Services. While services might represent some amazing boost in  
functionality, they may be at the detriment of you, your autonomy, and those  
people connected to you.

For developers in the open Web ecosystem:

* They should release software source code.
* The code which is human readable and compilable into code that  
  machines can read, under a license which supports releasing source  
  code on a network service.
* The major license for this is the Affero GNU General Public License,4 a  
  modification of the major Free Software license, the GNU GPL.5
* Developers supporting the open Web should replace popular non-free  
  alternatives when possible.6
* And finally, developers should work to replace centralized services with  
  open distributed ones when possible.

Your service providers should choose Free Software for their services. They  
should release customizations to their software under a Free Software license  
like the GPL or AGPL. And, they should allow for data portability and user  
autonomy built into their systems. They should respect your autonomy and  
choice. You should be able to control your private data.

Federated Social Web

It’s now 2011, three years since the Franklin Street Declaration and in many  
ways, and it is a similar climate to when Richard Stallman founded the Free  
Software Foundation for network services. Unlike this social and technical  
movement, the hope for Free Network Services comes down to non-profits  
supporting free projects like Wikipedia and the slow re-implementation of  
closed services by ragtag groups building community projects.

Meanwhile, web startups like StatusNet are building the federated social web  
as a Free Network Service, not just a clone of Twitter. Evan Prodromou,  
founder of Status.Net summarized in his Federated Social Web Top 10 of 2010  
blog post, the social web and Free Network Service space has been most  
active in 2010.7

The most interesting development (as in happening, not as in software  
development) has been Diaspora. Prodromou said, “In the wake of the F8  
[Facebook] keynote, a group of four students at NYU announced a kickstarter  
project to create a distributed social network. Unlike other mad-genius  
announcements, they managed to raise $200,000 USD to fund the project,  
with an unprecedented level attention from technology and mainstream  
media.”

Mark Zuckerberg donated $7,000 USD to Diaspora, the New York Times and  
BBC made a big deal about Diaspora as it being a Facebook killer. This could  
be the face of a real sustainable Free Network Service. It could be a service  
which supports your autonomy. Prodromou goes on to highlight that, “the  
stakes are high for Diaspora. A high-profile failure could be a huge setback for  
social web federation—essentially dooming its prospects for the consumer  
web. A high-profile success can potentially be the engine for a virtuous cycle  
of growth.”

Either way, you have choices in your fight for the open web. Free Network  
Services support your autonomy.

1. [http://autonomo.us/2009/iVautonomo-us-panel-explores-freedom-in-network-services-at-oscon-2009/](http://autonomo.us/2009/iVautonomo-us-panel-explores-freedom-in-network-services-at-oscon-2009/A)[A](http://autonomo.us/2009/iVautonomo-us-panel-explores-freedom-in-network-services-at-oscon-2009/A)
2. [http://www.alexa.com/topsites](http://www.alexa.com/topsitesA)[A](http://www.alexa.com/topsitesA)
3. [http://autonomo.us/2008/07/franklin-street-statement/](http://autonomo.us/2008/07/franklin-street-statement/A)[A](http://autonomo.us/2008/07/franklin-street-statement/A)
4. <http://www.gnu.org/licenses/agpl.htmr>
5. Generally, most assume that Google does not like the AGPL license because Google and many other large  
   corporations are notorious for using Free Software and hiding behind a network in order to not have to  
   return software source code back to the general public. This is beyond the scope of this discussion, but  
   an interesting point nonetheless.A
6. If any indication of the past struggles in technology have any bearing on the future, a great business plan  
   would be to pick any of these categories and replace it with a Free Network Service and sort out a  
   business plan. There are essentially complete categories needing Free Network Services including Internet  
   portal, office suites, social, creation apps, publication, and distribution, utilities, backend support,  
   project hosting, knowledge bases and more. If interested, please visit:  
   [http://autonomo.us/wiki/Wish\_list](http://autonomo.us/wiki/Wish_listA)[A](http://autonomo.us/wiki/Wish_listA)
7. [http://status.net/20l0/l2/3Vfederated-social-web-top-i0-of-20l0](http://status.net/20l0/l2/3Vfederated-social-web-top-i0-of-20l0A)[A](http://status.net/20l0/l2/3Vfederated-social-web-top-i0-of-20l0A)

10 Things You Can Do Now

As well as illustrating what we think the Open Web is, we also wanted to  
provide some practical steps that you can take towards this vision. The  
following are 10 steps starting with the most simple through to the more  
technical or involved.

Install a Free Browser

Install a recent version of the Firefox or Chrome browsers. They are free, open  
source and promote open standards. Without them the Open Web would be  
significantly diminished. If you keep your browser updated then it means that  
developers who are making tools for the Open Web can make good things  
happen faster.

Point your browser to <http://www.mozilla.org/firefox> or  
<http://www.google.com/chrome> and download them while they’re fresh.

Install Browser Plugins that enhance the Open Web

After installing a free browser, consider the following enhancements, and  
discover more:

* <https://www.eff.org/https-everywhere> causes your web browser to use  
  a secure connection to any website that supports secure connections,  
  enhancing your security and privacy.
* <http://flashblock.mozdev.org/> lets you control when (non-open and  
  performance killing) Flash plays in your browser.
* <http://adblockplus.org/en/> will block ads which slow down your browser  
  and leak privacy information to third parties.
* <https://www.torproject.org/projects/torbrowser.html.en> will help you  
  surf anonymously.

Note also that your browser is also a powerful tool for developing Web  
content and applications, not only for surfing. See

<http://chrispederick.com/work/web-developer/> and similar browser tools for  
developers.

Leave Facebook

If you haven’t joined consider not joining. If not you could consider leaving  
Facebook. We’re not advocating compulsory abolition. But we are Pro-Choice.

Within the menu system of Facebook you are encouraged to de-active rather  
than delete your Facebook account. This freezes your account but allows you  
to come back to it and thus retains all information.

However if you want the real deal then the form to delete your account can  
found here: <https://www.facebook.com/help/contact.php>?  
show form=delete account

Remember that if you do this you cannot use Facebook or log into any other  
web services usingyour Facebook login for 14 days otherwise your account  
will not be deleted.

Share your knowledge about the Open Web

Why not use the information in this guide here to help spread the word?  
There has been a lot of good work done to create great resources to  
communicate how to keep the Web more open which can be used as well.  
You can blog or use email to talk about projects or software you’ve found  
useful. You can publicly rail against attempts to make the Web more closed.  
Use all channels. Transmit on all frequencies.

It is worth looking at the Mozilla Drumbeat website  
-<http://www.drumbeat.org/-which> lists and supports many Open Web  
projects. It also acts to spread the ideas and technologies behind the Open  
Web.

Install some Free Software

You don’t have to have a free operating system to use Free Software. There  
are many areas of computing where there is no need to pay for or to pirate  
software to achieve what you want to do. However, the process of trying  
software to find out how useful it is can be a bit wearing. One of the  
advantages and disadvantages of Free Software is that there is so much out  
there.

The FLOSS Manuals website—http://en.flossmanuals.net—which gives help  
about how to use Free Software, is a good place to look for software which  
fits your needs.

<http://www.opensourcemac.org> is a also great resource which lists  
recommended Free Software for Macs here <http://opensourcewindows.org>  
the same, for Windows.

Use Status.net

Status.net is a micro-blogging service, similar to twitter. It is decentralized  
and Open Source (Free Software). This means you can run your own  
status.net installation.

If you don’t want to have to install your own status.net installation, you can  
get an account on or <http://identi.ca> or look at a cloud or self-hosted  
installation at <http://status.net>.

Status.net has some other neat features:

* You can automatically attach pictures or video to posts, so you don’t  
  need to hand your content to another party like twitpic or plixi.
* You can create/join groups. Posts into groups are distributed to all its  
  members, whether they are following you or not.
* You can take an RSS feed from a blog and automatically bring its latest  
  posts into your timeline.
* If you have a newish mobile phone (e.g., Android or iPhone ) you can  
  install a status.net application from your appstore to make publishing  
  and reading your time line simple.

Status.net makes easy to link your account to a Twitter or Facebook account  
so that updates that you make on Status.net are cross posted. This maybe a  
good way of starting a migration to a more open tool if you don’t want to  
leave Twitter and Facebook behind completely

It may also be useful if you wanted to update accounts used when leaking  
sensitive information, organizing demonstrations or other situations where  
greater anonymity is useful.

Provide your Website in other Languages

To provide your website in different languages easily, the best option would  
be to choose a Content Management system that supported localization.  
Localization is a term which encompasses translation and other adaptations  
(including changing images) which may be necessary to make your content  
suitable for audiences in different parts of the world.

<http://en.flossmanuals.net/opentranslationtools> is a great manual on Open  
Translation Tools.

Install a free Operating System

Installing a free Operating System marks a significant moment in your  
progress as foot soldier in the war for the Open Web. Many would advise you  
to start with an Operating System that does a lot of the hard work for you  
and ‘just works.’ Ubuntu has by far the biggest take up of Linux operating  
systems.

You can ask Ubuntu to send you an installation CD but most people download  
the CD for free from <http://www.ubuntu.com/desktop/get-ubuntu/download>  
and burn themselves a copy. Booting from the CD will walkyou through  
installing it on your computer. If you have a current installation of Windows  
you have the option to try them side by side, in what is known as a dual boot.  
You get to compare which operating system you prefer. Let the duel begin.

Learn to make a Web page

<http://p2pu.org/webcraft> is a great project which can talk you through the  
stages involved in this process of creating websites. It’s called the School of  
Webcraft, a project dedicated to providing web developer training that’s free,  
open and globally accessible.

Become a Cybrarian and use Semantic Web in your pages  
The Cybrarian is a Librarian in Cyberspace. They are dedicated to the radical  
idea of making knowledge as open as possible using the Web. Their weapons  
are wikis and their allies are search engines. If you want to further the cause  
of the Web as a common repository for all then you can look to include  
machine readable format so that your data can become part of the Semantic  
Web. The Semantic Web has the ability to act as the missing indexing service  
for the Web.

The Semantic Web is a concept which has been advocated for some time but  
still seems somewhat slippery. <http://wiki.creativecommons.org/Metadata>  
provides a definition:

The Semantic Web is the part of the Web available in RDF. The idea  
behind the concept of the Semantic Web is that when enough  
pages carry this machine-processable metadata, developers can  
build tools that take advantage of it. RDF can also be used to  
create more powerful search engines.

Linked Data is a less confusing term now used for Semantic Web technologies  
deployed on the Web.

The latest version of Drupal the popular web publishing system contains RDF  
support out of the box which is a big step forward in this struggle.

Global Battlegrounds

The Open Web Stack

While the battleground that we have established Is a personal one it is  
important to understand that there other other battles being fought that may  
not be so visible to us. Many of these have already taken place and have  
helped shaped the Open Web, however technology being what it is these  
battles are never over. The struggle continues. New standards have to be  
developed to keep up with new technologies, new open technologies have to  
be developed to keep up with closed technologies, and in some cases  
regulations need to be established guaranteeing online freedoms and the  
Open Web.

A lot of these battles happen in a realm that seems beyond our personal  
control however it is important to be aware of them and to know that this is  
not just a battle for the your desktop, browser, and social networks.

One of the least visible arenas happens in the layers beneath the browser in a  
technical realm that most of us do not understand or do not know exists.  
These layers are important because they not only gave us the Open Web but  
its ongoing survival also depends on them.

The Four Technical Layers

Any computing device can at some real level be separated into layers of  
hardware and software. Numerous strata of hardware and software are  
sandwiched between the physical components of keyboard and screen that  
mediate our everyday computing experience. Many more layers still separate  
our own computer from the millions of other devices that make up the  
Internet as we know it.

The entire Internet can be conceived as consisting of four basic technical  
layers. Each of these layers handles a different level of communication  
between networked devices, and is known as a protocol. The four layers  
together compose the Internet Protocol Suite.

The lowest level protocol is the link layer. This describes the actual physical  
hardware device, such as an Ethernet or WiFi connection, which ultimately  
handles the transfer of data.

Atop the link layer we find the internet layer and the transport layer. The  
internet layer describes the protocol for the movement of data from one  
device to another, while the transport layer is responsible for ensuring that  
any data sent along the network arrives intact at the intended destination.

The protocols that occupy these layers are commonly referenced together as  
Transmission Control Protocol and the Internet Protocol, orTCP/IP.

The final layer is the one that we are most intimately familiar with: the  
application layer, which is responsible for the content that is communicated  
over the network. The most familiar protocols in the application layer include  
HTTP, FTP and the various protocols which handle Email.

Each of these technical layers has its own set of Open Standards-agreed and  
documented rules-that enable them to communicate horizontally and  
vertically.

As we know In hindsight, each of these open standards created an explosion  
of Innovation. Ethernet enabled companies such as Cisco, 3Com and others to  
emerge and compete in an area that used to be dominated by huge vendors  
who built super-expensive networking systems designed by telephone  
companies to specifications hammered out over years in Inter-Governmental  
standards bodies.

Similarly, TCP/IP allowed Independent companies, the first ISPs to compete at  
providing network services to companies and individuals, breaking, often for  
the first time, monopolies that the telephone companies were granted by  
government. This introduced competition driving down the cost of moving  
bits around and also enabled a whole ecosystem of software components,  
many free and open source. Author David Weinberger would later describe  
this system as “small pieces loosely joined.” This new network created out of  
small objects developed by small teams using open standards and protocols  
was a completely new model.

The Open Web Layer

On top of these layers is where we live out our virtual existence. The Web sits  
on top of these 4 layers-this is what we mean by The Open Web Stack’. It is  
effectively where we can friend, share, innovate, communicate, learn, create  
and collaborate through the huge array of web services and social networks  
available to us.

|  |  |
| --- | --- |
| Open Web ^ | ^ Closed Web |
| Application | HTTP, FTP, E-Mail |
| Transport | TCP |
| Internet | IP |
| Link | WiFi, Ethernet |

The Open Web Stack is incredibly important not just for the Open Web but it  
has also enabled ‘closed’ services and many of the things we know today  
could not have been realized without the Open Web Stack. If you try to  
imagine what it would have been like to create Google without the Open Web  
it is impossible. Google would have no customers or content if it was not for  
the Open Web.

The Open Web Stack continues to disintermediate and disrupt sector after  
sector. We find businesses and whole industries having to change their  
models and compete with a whole new set of players ranging from individuals  
to companies to non-profit organizations.

The Open Web Stack is successful because they are open technologies and  
standards shepherded by non-profit organizations which are custodians of a  
bottom-up process taking inputs from and creating consensus from a wide  
variety of stakeholders.

Having 100 parallel Internets or 100 World Wide Webs governed by  
incompatible “standards” would suffocate the network effects that we enjoy  
on our one interoperable Web. However this is where we are headed. On top  
of these four layers we are increasingly seeing the closing of this stack. This is  
the closed web—it kills the stack at the top most layer by closing down the  
ability to communicate vertically and horizontally. It kills innovation and  
stifles collaboration.

|  |  |  |
| --- | --- | --- |
| The Future  / | |  |
| Open Web ( | 7 | 1 Closed Web |
| Technical Layers | | Stable |

Hence the fight for the Open Web is also an ongoing fight for layers you might  
not 'see' but which are nevertheless very important. The following chapters  
cover some of these important topics - Application Programming Interfaces  
(API), Cloud Computing, and the regulated filtering of content.

Standard but not Standards

It is highly unlikely that any single, non-trivial application will be able to  
independently contain within itself all necessary functions. Instead, it must  
communicate and interact with other pieces of software in order to obtain  
data, process it, and send it elsewhere. This becomes especially true of any  
piece of software that depends on the Internet for its operation. As a means  
of standardizing these interactions, software must implement application  
programming interfaces (or APIs) which define exact types of input they can  
accept and output they can generate.

Web APIs are the way for outside programmers to build new tools for using a  
website and its services, besides what the site itself provides to a user  
through a web browser. They also allow independent network services to  
communicate information to each other. Popular examples include mobile  
phone applications for posting pictures, blogs, or status updates to a web  
service without having to load a full web browser.

Sometimes, a walled garden owner provides an API to let “others” make some  
of the attractions in the garden, and get access to their users and perhaps  
some of the data lying in their silo in return. This enriches both the garden  
and the attraction owner, so it's a common strategy that brings a steady  
influx of eager third-party developers to Facebook, Apple’s App Store and  
other popular closed platforms.

On the face of it, a website that publishes an API and allows other websites  
and applications to connect to it and avail themselves of its services would  
seem to fit the very definition of an “open" Web. For certain, the existence of  
APIs do appear to allow developers (and by extension users) more choice  
about how to access and interact with their favorite online services. APIs also  
allow developers to build novel new applications on top of existing online  
services.

Although Web APIs are in their own right publicly defined, they are far from  
published standards in the strict sense, namely as open and public standards  
put in place by a neutral entity such as the World Wide Web Consortium  
(W3C). Instead, APIs are created entirely at the whim of the website that  
provides them. They can change at any time, and there is no guarantee that  
they will provide the functionality that the user might need or request.

There is usually also no easy way to use a program written for one API on  
another website. For example, the desktop client for the an online radio  
service last.fm1 does not mirror that of services of other music sites like  
Pandora or Spotify. In other words, the APIs to not use publicly vetted  
standards to transfer data, and most often, developers have to program  
applications anew for each platform. The exception to this would be the APIs  
built into popular open-source content management systems (CMSes) like  
Wordpress, MediaWiki or Drupal, so they work for most of the many sites  
using them.

As one example among many, an entire ecosystem of third party websites and  
applications has grown up around the Twitter API. So much so that the  
company has revealed that 75% of its internet traffic comes through its API  
rather than its website. While this has allowed users a constellation of choice  
about how to send and receive messages from Twitter, it has nevertheless put  
developers and users alike at the mercy of the single company providing the  
service: Twitter. Keep in mind that the company is under no contractual  
obligation to continue to make its API available to anyone. If it cancels access  
to its API, all of those business and users that rely on it are left hanging.

1. However, a simple API can be a useful starting place. For example, some functions of free network service  
Libre.fm can be used from many music players, because Libre.fm started by cloning the Last.fm API.

Tiers of the Cloud

Cloud Computing uses shared computer resources distributed throughout the  
Internet to deliver services and storage. A number of leading software and  
software service firms such as Amazon, Google, Microsoft and others now  
offer individual access to the powerful computing resources of their massive  
‘clouds’. However, this easy access to high-performance computing comes at  
a terrible cost: the centralization of control in a single service provider.

The technique of distributed computing has been put into practice since the  
first local-area networks were established to allow computers to  
communicate and interact. The primary advantage of distributing the  
workload among two or more devices is that their computational power can  
be combined even when the computational units are remote from one  
another.

The most basic type of distributed computing is a client-server architecture,  
which partitions computational workloads between a centralized node  
(which we call a server), sharing resources and data with its edge nodes  
(which we call clients). More complex still, the computations of a single  
application can be partitioned into separate but interconnected functional  
tiers; for example, a traditional 3-tier architecture separates a user interface  
(presentation logic) from data storage (data access logic), which are  
connected together by an information exchange layer (business logic). A 3-tier  
architecture is the the primary model of distributed computing on the web.

More powerful results can be achieved by what is know as a ‘cluster-large  
sets of machines coupled into powerful and robust units; a clustered  
architecture is essential to modern high-performance scientific computing.  
Conversely, a peer-to-peer architecture divides computational responsibility  
equally between a large number of loosely coupled computers. Peer-to-peer  
file sharing networks like BitTorrent, and anonymity networks like Tor, both  
work on this principle.

In all of these architectures, the computations are distributed in more than  
one sense: they can both be separated in physical space, and dissected into  
separate, autonomous but interacting processes that communicate via  
message passing.

With the right technical implementation, distributed computing has three  
primary advantages for fast and stable web services: the increased efficiency  
in terms of both lower cost and higher performance gained by clustering a set  
of low-end computational units based on commodity hardware; the increased  
reliability that is gained by avoiding a single point of failure in the system; and  
the relative ease of scaling the network up or down by bringing additional  
nodes online or offline.

Enterprises whose business depends upon ownership of capital-intensive data  
centers have begun to offer on-demand rental access to these computational  
resources to individuals and small- and medium-sized companies. These  
services treat computation as a pure utility, insofar as the details of the  
where, the what and the how is abstracted from its users. In this way, cloud  
computing provides the power of high-performance and dynamically scalable  
resources to users, with lower barriers to entry and minimal capital  
expenditure.

At the same time, the same innovations that eliminate the requirement for  
consumer expertise in the underlying infrastructure of these computing  
platforms, in the last analysis robs them of control over these resources.

Cloud computing as the pure exemplar of distributed computing technology  
is also the pinnacle of centralized control over computing resources.

Online file storage and back-up services such as Dropbox  
(<http://dropbox.com>) have made it easy for individuals to move their home  
folders into the “cloud” and sync personal files across all computing devices,  
whether laptop, phone or tablet. Website developers are likewise able to  
deploy and manage web applications in the “cloud” that can effectively scale  
from dozens up to millions of users, by availing themselves of services such as  
Engine Yard (<http://engineyard.com>) or Heroku (<http://heroku.com>).

But there is a price to be paid for this convenience. Dropbox, Engine Yard and  
Heroku are not themselves in the business of cloud computing. Each of them,  
as well as hundreds of other services, are merely clever interfaces to Amazon  
Elastic Compute Cloud (<http://aws.amazon.com/ec2/>). While having your data  
and online accounts backed by Amazon’s data centers may sound like your  
best guarantee of stability, it is also means surrendering control of these data  
to a single company. This threat became real enough for one organization,  
when Amazon shut down hosting the WikiLeaks website after succumbing to  
government coercion.1

<http://www.guardian.co.uk/media/2010/dec/01/wikileaks-website-cables-servers-amazon'>

Edges of Autonomy

Internet filtering is a set of techniques that censors use to try to prevent  
Internet users from accessing particular content or services. Network  
operators can filter at any point in a network, using a wide variety of  
technologies, with varying levels of accuracy and customizability. Typically,  
filtering involves using software to look at what users are attempting to do  
and to selectively interfere with activities that the operator considers  
forbidden by policy. A filter could be created and applied by a national  
government or by a national or local Internet access provider. Filtering can  
also have very real and very harsh real world consequences. If governments  
monitor an individuals online activity and someone can be hauled away for  
writing something mildly offensive online, then its pretty hard to argue the  
Web is open for them regardless of the technical architecture and freedom of  
the software/content.

However, advocating an entirely ‘open web’ where all things are accessible  
(unfiltered) to all people is also a problematic position as it is not a polar  
equation but a rather a position on a continuum. It seems quite clear that  
governmental blocking of access to Open Education Resources (OER) on the  
web is not acceptable where as it would be hard to take issue with the  
individual that sets up filters on their work PC to moderate their excessive  
non-work web habits (such as checking Facebook at work). Along that  
continuum there are many grey questions—is it acceptable for parents to  
establish filters to block or monitor a child’s access to pornography. Should  
schools be able to filter social networks like Twitter?

The question of whether filtering is appropriate often comes down the  
motivation for filtering and who is doing the filtering. An Open Web as we see  
it generally advocates for as much autonomy as possible when determining  
what should be filtered.

In many countries, it is no secret that government censorship of the Internet  
exists, as documented in the book Access Denied: The Practice and Policy of  
Global Internet Filtering, edited by Ronald Delbert, John Palfrey, Rafal  
Rohozlnski, and Jonathan Zittrain (<http://opennet.net/accessdenied>). When a  
popular site is widely blocked, that fact tends to become widely known  
within the country.

But, in general, determining whether someone is preventing you from  
accessing a Web site or from sending information to others can be difficult.  
When you try to access a blocked site, you may see a conventional error  
message or nothing at all... the behavior may look like the site is inaccessible  
for technical reasons.

Some organizations, most notably the OpenNet Initiative (<http://opennet.net>),  
are using software to test Internet access in various countries and to  
understand how access may be compromised by different parties. In some  
cases, this is a difficult or even dangerous task, depending on the authorities  
concerned.

In some countries, there is no doubt about government blocking of parts of  
the Internet. In Saudi Arabia, attempting to access pornography results in a  
message from the government explaining that the site is blocked, and why. In  
countries that block without notification, one of the commonest signs of  
censorship is that a large number of sites with related content are  
inaccessible for long periods of time, except perhaps when they take  
countermeasures such as moving to a new domain. Another is that search  
engines return useless results or nothing at all about certain topics. These  
may be related to pornography, gambling, drugs (including alcohol) or other  
illegal activities or to political or religious movements deemed dangerous (for  
example, neo-Nazi sites blocked in Germany).

As discussed above, filtering or blocking is also done for a variety of reasons  
that have little to do with politics. Parents may filter the information that  
reaches their children. Many organizations, from schools to commercial  
companies to the US military, restrict Internet access in order to prevent  
users from having unmonitored communications, using company time or  
hardware for personal reasons, infringing copyrights, or using excessive  
networking resources.

However the more serious consequences of filtering come when injustices  
occur as a result of governments filtering and monitoring an individuals  
access. France, for example, passed a law in 2009 intended to control and  
regulate internet access through compliance with copyright law. HADOPI, as  
the law is called, initially proposed revoking a user’s access to the internet  
merely upon accusation of copyright infringement. The law was ultimately  
scaled back to require judicial review before plugging the plug, but the  
practice raises huge questions about a government that undermines a  
fundamental right to internet access as articulated by the European Union:

"Recognising that the Internet is essential for education and for  
the practical exercise of freedom of expression and access to  
information, any restriction imposed on the exercise of these  
fundamental rights should be in accordance with the European  
Convention for the Protection of Human Rights and Fundamental  
Freedoms. Concerning these issues, the Commission should  
undertake a wide public consultation.”

Hence the battle for an Open Web here is not just one of appropriate  
regulation vs autonomy but also overlaps with the age old fight for civil  
rights.

Other People's Computers

Much of what we call collaboration occurs on web sites generally running  
software services. This is particularly true of collaboration among many  
distributed users. Direct support for collaboration, and more broadly for  
social features, is simply easier In a centralized context. It Is possible to  
imagine a decentralized Wikipedia or Facebook, but building such services  
with sufficient ease of use, features, and robustness to challenge centralized  
web sites is a very difficult task.

Why does this matter? Making it relatively easy for people to work together In  
the specific way offered by a web site owner Is a rather Impoverished vision  
of what the web and digital networks could enable, just as merely allowing  
people to run programs on their computers in the way program authors  
intended is an Impoverished vision of personal computing.

Free software allows users control their own computing and to help other  
users by retaining the ability to run, modify, and share software for any  
purpose. Whether the value of this autonomy is primarily ethical, as often  
framed by advocates of the term free software, or primarily practical, as often  
framed by advocates of the term open source, any threat to these freedoms  
has to be of deep concern to anyone interested in the future of collaboration,  
both in terms of what collaborations are possible and what interests control  
and benefit from those collaborations. Kragen Sltaker frames the problem  
with these threats to freedom:

"Web sites and special-purpose hardware [...] do not give me the  
same freedoms general-purpose computers do. If the trend were  
to continue to the extent the pundits project, more and more of  
what I do today with my computer will be done by special-  
purpose things and remote servers.

What does freedom of software mean In such an environment?

Surely it's not wrong to run a Web site without offering my  
software and databases for download. (Even If It were, it might  
not be feasible for most people to download them. IBM's patent  
server has a many-terabyte database behind it.)

I believe that software-open-source software, In particular-has the  
potential to give Individuals significantly more control over their  
own lives, because It consists of ideas, not people, places, or  
things. The trend toward special-purpose devices and remote  
servers could reverse that.

-Kragen Sitaker, "people, places, things, and ideas"1

What are the prospects and strategies for keeping the benefits of free  
software in an age of collaboration mediated by software services? One  
strategy, argued for in "The equivalent of free software for online services" by  
Kragen Sitaker,2 is that centralized services need to be re-implemented as  
peer-to-peer services that can run on computers as free software under users'  
control. This is an extremely interesting strategy, but a very long term one, for  
it is both a computer science challenge and a social one.

Abstinence from software services may be a naive and losing strategy in both  
the short and long term. Instead, we can both work on decentralization as  
well as attempt to build services that respect user's autonomy:

"Going places I don’t individually control-restaurants, museums,  
retail stores, public parks-enriches my life immeasurably. A  
definition of "freedom" where I couldn't leave my own house  
because it was the only space I had absolute control over would  
not feel very free to me at all. At the same time, I think there are  
some places I just don’t want to go-my freedom and physical well-  
being wouldn't be protected or respected there.

Similarly, I think that using network services makes my computing  
life fuller and more satisfying. I can do more things and be a more  
effective person by spring-boarding off the software on other  
peoples' computers than just with my own. I may not control  
your email server, but I enjoy sendingyou email, and I think it  
makes both of our lives better.

And I think that just as we can define a level of personal autonomy  
that we expect in places that belong to other people or groups, we  
should be able to define a level of autonomy that we can expect  
when using software on other people's computers. Can we make  
working on network services more like visiting a friends' house  
than like being locked in a jail?

We've made a balance between the absolute don't-use-other-  
people's-computers argument and the maybe-it's-OK-sometimes  
argument in the Franklin Street Statement. Time will tell whether  
we can craft a culture around Free Network Services that is  
respectful of users' autonomy, such that we can use other  
computers with some measure of confidence."

-Evan Prodromou, "RMS on Cloud Computing: 'Stupidity'”3

The Franklin Street Statement on Freedom and Network Services is an initial  
attempt to distill actions that users, service providers (the "other people"  
here), and developers should take to retain the benefits of free software in an  
era of software services:

"The current generation of network services or Software as a  
Service can provide advantages over traditional, locally installed  
software in ease of deployment, collaboration, and data  
aggregation. Many users have begun to rely on such services in  
preference to software provisioned by themselves or their  
organizations. This move toward centralization has powerful  
effects on software freedom and user autonomy.

On March 16, 2008, a working group convened at the Free  
Software Foundation to discuss issues of freedom for users given  
the rise of network services. We considered a number of issues,  
among them what impacts these services have on user freedom,  
and how implementers of network services can help or harm  
users. We believe this will be an ongoing conversation, potentially  
spanning many years. Our hope is that free software and open  
source communities will embrace and adopt these values when  
thinking about user freedom and network services. We hope to  
work with organizations including the FSF to provide moral and  
technical leadership on this issue.

We consider network services that are Free Software and which  
share Free Data as a good starting-point for ensuring users'  
freedom. Although we have not yet formally defined what might  
constitute a 'Free Service', we do have suggestions that  
developers, service providers, and users should consider:

Developers of network service software are encouraged to:

* Use the GNU Affero GPL, a license designed specifically for  
  network service software, to ensure that users of services  
  have the ability to examine the source or implement their  
  own service.
* Develop freely-licensed alternatives to existing popular but  
  non-Free network services.
* Develop software that can replace centralized services and  
  data storage with distributed software and data  
  deployment, giving control back to users.

Service providers are encouraged to:

* Choose Free Software for their service.
* Release customizations to their software under a Free  
  Software license.
* Make data and works of authorship available to their  
  service's users under legal terms and in formats that enable  
  the users to move and use their data outside of the service.  
  This means:
* Users should control their private data.
* Data available to all users of the service should be available  
  under terms approved for Free Cultural Works or Open  
  Knowledge.

Users are encouraged to:

* Consider carefully whether to use software on someone  
  else's computer at all. Where it is possible, they should use  
  Free Software equivalents that run on their own computer.  
  Services may have substantial benefits, but they represent a  
  loss of control for users and introduce several problems of  
  freedom.
* When deciding whether to use a network service, look for  
  services that follow the guidelines listed above, so that,  
  when necessary, they still have the freedom to modify or  
  replicate the service without losing their own data."

-Franklin Street Statement on Freedom and Network Services4

As challenging as the Franklin Street Statement appears, additional issues  
must be addressed for maximum autonomy, including portable identifiers

"A Free Software Definition for the next decade should focus on  
the user's overall autonomy- their ability not just to use and  
modify a particular piece of software, but their ability to bring  
their data and identity with them to new, modified software.

Such a definition would need to contain something like the  
following minimal principles:

1. data should be available to the users who created it without  
   legal restrictions or technological difficulty.
2. any data tied to a particular user should be available to that  
   user without technological difficulty, and available for  
   redistribution under legal terms no more restrictive than the  
   original terms.
3. source code which can meaningfully manipulate the data  
   provided under l and 2 should be freely available.
4. if the service provider intends to cease providing data in a  
   manner compliant with the first three terms, they should  
   notify the user of this intent and provide a mechanism for  
   users to obtain the data.
5. a user's identity should be transparent; that is, where the  
   software exposes a user's identity to other users, the  
   software should allow forwarding to new or replacement  
   identities hosted by other software."

-Luis Villa, "Voting With Your Feet and Other Freedoms"5

Fortunately the oldest, and at least until recently, the most ubiquitous  
network service-email-accommodates portable identifiers. (Not to mention  
that email is the lowest common denominator for much collaboration-  
sending attachments back and forth.) Users of a centralized email service like  
Gmail can retain a great deal of autonomy if they use an email address at a  
domain they control and merely route delivery to the service-though of  
course most users use the centralized provider's domain.

Making email address portability available on a wider scale could be cheaper  
and technically easier. As an example, a democratically-run non-profit The  
Internet Users Forever IKI has worked to make this a reality in Finland. Since  
1995, more than 24000 individuals have paid the one-time membership fee and  
received an (aiki.fi address they can route to a provider of their choosing. The  
fees earn interests that are used to finance the routing service.6

It is worth noting that the more recent and widely used, if not ubiquitous,  
instant messaging protocol XMPP as well as the brand new and little used  
Wave protocol have an architecture similar to email, though use of non-  
provider domains seems even less common, and in the case of Wave, Google  
is currently the only service provider.

It may be valuable to assess software services from the respect of community  
autonomy as well as user autonomy. The former may explicitly note  
requirements for the product of collaboration-non-private data, roughly-as  
well as service governance:

In cases where one accepts a centralized web application, should  
one demand that application be somehow constitutionally open?

Some possible criteria:

* All source code for the running service should be published  
  under an open source license and developer source control  
  available for public viewing.
* All private data available for on-demand export in standard  
  formats.
* All collaboratively created data available under an open  
  license (e.g., one from Creative Commons), again in standard  
  formats.
* In some cases, I am not sure how rare, the final mission of  
  the organization running the service should be to provide  
  the service rather than to make a financial profit, i.e.,  
  beholden to users and volunteers, not investors and  
  employees. Maybe. Would I be less sanguine about the long  
  term prospects of Wikipedia if it were for-profit? I don't  
  know of evidence for or against this feeling.

-Mike Linksvayer, "Constitutionally open services”7

Software services are rapidly developing and subjected to much hype, often  
referred to as the buzzword Cloud Computing. However, some of the most  
potent means of encouraging autonomy may be relatively boring-for example,  
making it easier to maintain one's own computer and deploy slightly  
customized software in a secure and foolproof fashion. Any such  
development helps traditional users of free software as well as makes doing  
computing on one's own computer (which may be a "personal server" or  
virtual machine that one controls) more attractive.

Perhaps one of the most hopeful trends is relatively widespread deployment  
by end users of free software web applications like WordPress and MediaWiki.  
StatusNet, free software for microblogging, is attempting to replicate this  
adoption success. StatusNet also includes technical support for a form of  
decentralization (remote subscription) and a legal requirement for service  
providers to release modifications as free software via the ACPL.

This section barely scratches the surface of the technical and social issues  
raised by the convergence of so much of our computing, in particular  
computing that facilitates collaboration, to servers controlled by "other  
people", especially when these "other people" are a small number of large  
service corporations. The challenges of creating autonomy-respecting  
alternatives should not be understated.

One of those challenges is only indirectly technical: decentralization can make  
community formation more difficult. To the extent the collaboration we are  
interested in requires community, this is a challenge. However, easily formed  
but inauthentic and controlled community also will not produce the kind of  
collaboration we are interested in.

We should not limit our imagination to the collaboration facilitated by the  
likes of Facebook, Flickr, Google Docs, Twitter, or other "Web 2.0" services.  
These are impressive, but then so was AOL two decades ago. We should not  
accept a future of collaboration mediated by centralized giants now, any  
more than we should have been, with hindsight, happy to accept information  
services dominated by AOL and its near peers.

Wikipedia is both held up as an exemplar of collaboration and is a free-as-in-  
freedom service: both the code and the content of the service are accessible  
under free terms. It is also a huge example of community governance in many  
respects. And it is undeniably a category-exploding success: vastly bigger and  
useful in many more ways than any previous encyclopedia. Other software  
and services enabling autonomous collaboration should set their sights no  
lower-not to merely replace an old category, but to explode it.

However, Wikipedia (and its MediaWiki software) are not the end of the story.  
Merely using MediaWiki for a new project, while appropriate in many cases, is  
not magic pixie dust for enabling collaboration. Affordances for collaboration  
need to be built into many different types of software and services. Following  
Wikipedia's lead in autonomy is a good idea, but many experiments should be  
encouraged in every other respect. One example could be the young and  
relatively domain-specific collaboration software that this book is being  
written with, Booki.

Software services have made "installation" of new software as simple as  
visiting a web page, social features a click, and provide an easy ladder of  
adoption for mass collaboration. They also threaten autonomy at the  
individual and community level. While there are daunting challenges, meeting  
them means achieving "world domination" for freedom in the most important  
means of production-computer-mediated collaboration-something the free  
software movement failed to approach in the era of desktop office software.

1. <http://lists.canonical.org/pipermail/kragen-tol/1999-January/000322.htmr>
2. [http://lists.canonical.org/pipermail/kragen-tol/2006-July/0008i8.html](http://lists.canonical.org/pipermail/kragen-tol/2006-July/0008i8.htmlA)[A](http://lists.canonical.org/pipermail/kragen-tol/2006-July/0008i8.htmlA)
3. CC BY-SA [http://autonomo.us/2008/09/rms-on-cloud-computing-stupidity](http://autonomo.us/2008/09/rms-on-cloud-computing-stupidityA)[A](http://autonomo.us/2008/09/rms-on-cloud-computing-stupidityA)
4. CC BY-SA [http://autonomo.us/2008/07/franklin-street-statement](http://autonomo.us/2008/07/franklin-street-statementA)[A](http://autonomo.us/2008/07/franklin-street-statementA)
5. CC BY-SA [http://tieguy.org/blog/2007/l2/06/voting-with-your-feet-and-other-freedoms](http://tieguy.org/blog/2007/l2/06/voting-with-your-feet-and-other-freedomsA)[A](http://tieguy.org/blog/2007/l2/06/voting-with-your-feet-and-other-freedomsA)
6. [http://www.iki.fi/iki/statistics.html](http://www.iki.fi/iki/statistics.htmlA)[A](http://www.iki.fi/iki/statistics.htmlA)
7. CCO [http://gondwanaland.com/mlog/2006/07/06/constitutionally-open-services](http://gondwanaland.com/mlog/2006/07/06/constitutionally-open-servicesA)[A](http://gondwanaland.com/mlog/2006/07/06/constitutionally-open-servicesA)

5 Battlefield Tactics

While some battles are seemingly beyond our control as individuals, we can  
still influence the outcome, especially if we work strategically within groups.  
Increasingly, success in these areas may depend on the coordinated work of  
communities in partnership with larger entities. Here are five tactics to help  
you agitate and educate within organizations, peer groups or public bodies.

Promoting Open licenses

If your organization publishes work online then you can support the Open  
Web by making clearyour intentions about how you want people to be able  
to reuse your work. The best way to do this is by giving your work a license. If  
your organization works with software this is often done using a Free  
Software license. It is very likely that if you work with computer enthusiasts,  
they will be able to share their knowledge on this.1

Creative Commons have done some amazing work in the area of open  
licenses for non-software projects, especially in the areas of culture,  
education and science. The Creative Commons website has a license chooser2which helps you choose a license by asking you a few simple questions. For  
your troubles you get:

* a web button with nifty graphics that you can embed in your web page
* a link through to a human readable interpretation of how you want your  
  work to be used
* a full legal code that lawyers have created to make your intentions  
  enforceable

Using this website and tools may help you convince your bosses, co-workers  
and legal department that choosing an open license is the right choice to  
achieve the goals of your organization.

Bypassing Censorship and Surveillance

As previously indicated, the fight for the Open Web is also a fight for Civil  
Rights. Lobbying done by organizations like the Electronic Frontier  
Foundation3 plays a vital role in this struggle and we should support them  
and their campaigns. However, sometimes lobbying just isn’t enough. Luckily,  
there are also tactics for non-violent resistance for those who refuse to move  
to the back of the Web. The tools to defeat Internet blocking, filtering and  
monitoring are designed to deal with different obstacles and threats.

Your organization or peer group can make a real difference. Here are some  
general pointers to more information on how you can work with others to  
support appropriate resistance to inappropriate censorship:

* Set up and help others use a public Proxy, an easy way to make it more  
  difficult to trace the Internet use.4
* Encourage the use of routers like the TOR (The Onion Router) project.5
* Set up and help others use a Virtual Private Network. VPN and tunneling  
  are techniques that allow you to encrypt the data connections between  
  yourself and another computer.6

To learn more about digital security, privacy and tools that may facilitate  
circumventing censorship, preventing eavesdropping, and remaining  
anonymous there are detailed resources on the Internet which share  
technical content on this subject.7

Creating Subtitles

In the context of increasing use of online video, the importance of providing  
subtitles for wider accessibility cannot be overstated. Providing foreign  
language subtitles increases your potential audience hugely. In addition  
subtitles in the original language opens the door to hearing impaired viewers  
as well as second language audiences.8

There are some great tools for subtitling on the Web which allow users to:

* Create subtitles for videos using an online transcribing tool.
* Upload pre-prepared subtitle files to display over video clips.
* Create or embed video players which allow viewers to choose which  
  language subtitles are displayed.
* Download subtitle files to help create DVDs or for general offline use.

If you are involved in an organization or network that distributes video online,  
you can push to make sure that subtitles are not overlooked. Furthermore, an  
open and community approach to subtitles is needed (as was the case with  
Wikipedia) if volunteer-based translation of subtitles is to take ofF. It is  
difficult to imagine tens of thousands of users translating videos if their work  
is then owned or controlled by a corporation. The Universal Subtitle project is  
also working towards that goal, with the aim of creating a decentralized  
network of open and searchable subtitle databases.9

Hosting Independent Websites, Blogs and Networks

Automattic the company that runs wordpress.com does not claim to offer  
anonymous blogging, but users might assume that some degree of legal  
authority would be needed to access the identities of their bloggers.

However, Automattic recently handed over the personal data of the owner of  
a blog criticizing the VC of the University of Salford to the University  
seemingly without a court order.10

In this case although Wordpress In built on free software, the Installation of it  
at Wordpress.com can be seen as a centralized Network Service. The Open  
Web, which established a decentralized approach to hosting, has inbuilt  
resilience to censorship. Reliance on huge Network Services as the arbiters of  
Free Speech is a very weak position. Such services come under daily pressures  
from authorities for disclosure. As such, they often opt for an easy life by  
handing over personal details and suspending accounts, websites and blogs  
with little in the way of an appeal process.

If you are part of a group that feels able to foster an online community that  
values Free Speech then you can do this in a very practical way by providing  
reliable and secure hosting to groups and individuals who share your aims.  
There are many technical and social tactics to achieve this. Here are some of  
them:

Technical aspects of hosting

This book mentions numerous useful Free Network tools, Wordpress is a  
particularly useful one. You can download it and install it on your own server.  
As such, you are not bound by the take-down and privacy policy of  
Wordpress.com. If you have website creation skills, it is relatively easy to  
install a Wordpress network. This allows you to host many blogs, install extra  
functionality for them and makes it easy to keep the software updated.  
Wordpress blogs are a great entry point into the social media maze as they  
have RSS feeds, publicly vetted APIs and useful plugins to allow cross posting.  
With the BuddyPress functionality you can also create a very usable Social  
Network.

You can anonymize blogs and services by not logging IP addresses. The  
process of not logging IP addresses on a server using Apache is relatively  
simple. Use the removeip Apache module. Rather than trying to remove all  
logs of IP addresses it replaces them with an arbitrary IP number.11

Avoid the Cloud. Hosting your blogs or networks in the Cloud may oflfer  
technical advantages but reduces your control of your resources. Choose a  
smaller provider who can offer more support and options.

Social aspects of hosting

Here are some tips for running a hosting collective as part of your project:

* Make sure you are agreed on what/who you are prepared to host or not
* Make this agreement public as your AUP (acceptable usage policy)
* Create a clear (and perhaps automated) process for applying for a  
  website or blog
* Have a firm, clear and fair way of taking down websites that you no  
  longer feel you can support and suggest alternative hosting options for  
  users you have to disconnect

Supporting Standards

As an individual, your influence in promoting the adoption of Open standards  
and formats is limited. Howeveryou can make a difference by working in  
partnership with other groups and networks to help form a critical mass of  
adoption. This is especially true in the area of media formats.

In the same way that APIs are widespread but not ‘Standards’, the same  
applies to many media file formats. The Mp3 audio format has patenting  
restrictions that make it difficult to support their use in free software. This is  
problematic, especially for groups who cannot afford to pay for software. The  
same situation exists for popular Video formats.

Recently Google announced that their Chrome browser wouldn’t support the  
most widely adopted but patented video format ‘h264’. The announcement  
has divided opinions. Many criticised the decision as a step backward for  
openness,12 whilst others supported it as a blow to the patented h264 and  
therefore a boon to the advancement of more open formats.13

Until recently the situation had been bleak for groups who wanted to support  
the Open Web in the world of Video.14 However, there are now open formats  
which we can advocate that are supported with the new <video> tag in  
HTML5.

If you want to create open video formats you can use Miro Video Converter.  
This is simple to use software for Windows and Mac to convert to a number  
of presets including the open formats Ogg Theora and WebM. The free  
software tool is made by the Participatory Culture Foundation who have a  
great track record of building tools that make it easy to use open standards in  
the world of online video.15

1. Free Software Definition <http://www.gnu.org/philosophy/free-sw.htmr>
2. <http://creativecommons.org/choose/>
3. <http://www.eff.org/>
4. [http://en.flossmanuals.net/CircumventionTools/WhatlsAWebProxy](http://en.flossmanuals.net/CircumventionTools/WhatlsAWebProxyA)[A](http://en.flossmanuals.net/CircumventionTools/WhatlsAWebProxyA)
5. <https://www.torproject.org/>
6. <http://en.flossmanuals.net/CircumventionTools/WhatlsVPN>
7. [http://security.ngoinabox.org/html/en/index.html](http://security.ngoinabox.org/html/en/index.htmlA)[A](http://security.ngoinabox.org/html/en/index.htmlA)
8. [http://en.flossmanuals.net/VideoTranslation/](http://en.flossmanuals.net/VideoTranslation/A)[A](http://en.flossmanuals.net/VideoTranslation/A)
9. [http://universalsubtitles.org](http://universalsubtitles.orgA)[A](http://universalsubtitles.orgA)
10. [http://manchestermule.com/article/anonymity-over-for-wordpress-bloggers](http://manchestermule.com/article/anonymity-over-for-wordpress-bloggersA)[A](http://manchestermule.com/article/anonymity-over-for-wordpress-bloggersA)
11. [https://we.riseup.net/debian/apache](https://we.riseup.net/debian/apacheA)[A](https://we.riseup.net/debian/apacheA)
12. <http://arstechnica.com/web/news/20U/0l/googles-dropping-h264-from-chrome-a-step-backward-for->

openness.ars/

1. [http://www.yelvington.com/content/video-tag-mess-and-why-googles-interests-are-mostly-our-interests](http://www.yelvington.com/content/video-tag-mess-and-why-googles-interests-are-mostly-our-interestsA)[A](http://www.yelvington.com/content/video-tag-mess-and-why-googles-interests-are-mostly-our-interestsA)
2. [http://wiki.transmission.cc/index.php/FOSS\_Codecs\_For\_Online\_Video](http://wiki.transmission.cc/index.php/FOSS_Codecs_For_Online_VideoA)[A](http://wiki.transmission.cc/index.php/FOSS_Codecs_For_Online_VideoA)
3. <http://mirovideoconverter.com/>

Conclusion

The Web is Open?

Most of what the Web offers today has evolved because it was based on open  
standards. But this was never guaranteed. When the Internet first became  
widely used by ordinary people, in the early to mid-1990s, a number of media  
and telecom companies like AOL, CompuServe and MSN vied to build their  
own “walled garden” services. The idea was that users would stay most of  
their time within closed networks owned by these companies, using their  
own information services, communicating mainly with other subscribers to  
the same service—and paying, not just for connectivity, the bits and bytes of  
getting online, but also, and mainly, for access to information, and even for  
the right to produce information themselves. In the end, this business model  
was eroded by the explosion in use of open Internet standards. These  
companies were forced first to provide access to it to stay competitive, and  
ultimately to compete as Internet Service Providers with others such as  
telecom companies simply to sell connectivity.

The richness of the Open Web today is a result of the victory of those open  
standards. Because the Internet became the world’s first real-time meeting  
place for ideas and services, it forced companies to set out their stall there.

We take for granted services such as Google Maps, YouTube, open translation  
engines, or the ability to sign up to any number of Web-based email accounts  
which we can access from any Internet cafe in the world. But what if the  
open Internet had been dwarfed by the walled garden services of the 1990s?  
Would Wikipedia have developed to the stage where it is now? Would we  
even have blogging services such as Wordpress and Blogger, provided as they  
are by companies whose business model relies on the fact that their  
thousands of Web servers are mostly powered by Apache, an open source  
server program free for anyone to use? Would these commercial information  
networks have spread to two billion users around the world as the open  
Internet has? We cannot answer any of these individual questions with  
certainty, but there is no doubt that that in general we would be information-  
poorer. For good or bad our current world view, which assumes that sooner  
or later everyone will be online all the time, would simply not hold.

It is important to understand that many people fought for that victory, early  
Internet pioneers such as the Electronic Frontier Foundation and the free and  
open source software movement. Thousands of others came later with other  
ideas. Imagine the enormous amount of work necessary to give you Mozilla  
Firefox—a struggle that was considered to be over and lost and yet through  
the efforts of many thousands of people that believed in the open web it now  
holds a substantial market share. We will continue to enjoy the fruits of an  
Open Web only as long as enough people remain engaged to defend it. Now  
more than ever that defense is dependent on you—on the decisions you make.

Epilogue

The Myth of Openness

'Some questions may be raised when looking at the current use of the web  
and the high popularity of Google and social networks such as Facebook.

These questions tap into cultural variables that have not been addressed  
elsewhere in this book but which are important to understand such a  
revolution. Digital environments such as Google Maps or the walled gardens  
of Facebook are dramatically changing the way we relate to people, ourselves  
and the world. Considering the high speed in which they have been adopted  
one might assume that in fact there are different layers at which  
representations about the world and ourselves are distributed. What kind of  
processes are at work on a personal and collective levels? This epilogue is an  
attempt at drawing a map of what might be considered when thinking of the  
cultural dimensions attached to the open (or closed?) web.

The Internet is a network controlled by protocols. Alexander Galloway speaks  
of the protocols that support Internet technology. He attributes to them a  
disciplinary form of control executed by networks. Inside the Internet there is  
no escape from protocols, because they are the way computers communicate  
and distribute information, through TCP/IP and DNS. Protocols are a  
technology of inclusion he observes, and in this sense change or resistance  
inside the World Wide Web is to be done within “the protocological”.2

Even if Internet protocols enable decentralization (representing a  
decentralized circuit), they are based upon forms of control of an invisible  
kind, iterating through series of different nodes, giving the impression there is  
freedom-but it is a customised freedom at best, at worst a kind of prison.

Even inside this limited sphere we are losing or giving away our freedoms  
-more and more people are trading privacy for convenience. Web 2.0, as  
embodied by Facebook and Twitter, has some resemblances to the shopping  
mall, being promoted as a way of meeting new people, or getting in touch  
with old friends, or keeping everyone informed of your activities. It is a social  
mall where the commodity for sale is personality.

The model of the network is the optimal circuit of control acting upon  
contemporary civilization.

Celebrated at times as a sort of utopia, networks perform as a modern kind of  
prison. The Internet is a disciplinary diagram based upon forms of  
decentralized control. Resting upon the idea of Progress as obligatory, the  
network has evolved into an optical or panoptical system of control, powered  
by the optimization of remote communication.

Lewis Mumford in "The Myth of the Machine’’3 describes Egyptian civilization,  
pointing out how writing was the first form of programming at a distance,  
allowing ruling powers to reproduce precise commands to distant slave  
workers building the Pyramids. Since the Internet is based on text one could  
state that from its written nature it has developed newer forms of  
instructions to be executed over human and social behaviour. The Internet  
hides processes that instruct commands in an invisible decentralized fashion,  
these in turn affect behaviour. You can only Interact with your Friends in your  
Facebook account in certain scripted ways, and these transactions hide a  
growing sphere of corporate initiated absorption of Facebook profile  
information (but did Facebook ask you?).

Facebook is a good example of a pseudo-open Web resting on weak relations  
where these socialities (‘communities’) are founded on tenuous horizontal  
connections or superficial connections where a horizontal terminology is  
used, but isn’t enshrined. Proprietary social network sites might use the  
rhetoric of the horizontal, but in a weak and superficial manner since is  
always subject to the rules of the host which are ultimately contingent, and  
never so decentralized nor open.

Social networks are sanitized, they don’t contain the dirtiness of body to body  
contact, they work as separated galleries, clean and constrained and their aim  
is the commodification of friendship, capitalizing on relations and affection  
for corporate interests.

Profiles in social networks exemplify a newer form of discipline. Manuel  
Castells writes about it this way: “In a world of global flows of wealth, power,  
and images, the search for identity, collective or individual, ascribed or  
constructed, becomes the fundamental source of meaning. This is not a new  
trend... Yet identity is becoming the main, and sometimes the only, source of  
meaning in a historical period characterized by widespread destructuring of  
organizations, delegitimization of institutions, fading away of major social  
movement.”4 The search for identity taken to an extreme form such as  
creating and sharing profile information is changing the way we relate to  
others.

“I have been told many times, you don’t exists if you don’t have Facebook,  
but actually even if I don’t have a Facebook account my spectral presence Is  
animated by my friends accounts, their pictures, their statuses. Like my  
former boyfriend, he changed his status from “engaged” to “single” four  
months before we actually broke up. I couldn’t know because I have no  
Facebook account, but all his Facebook friends knew about it and some were  
asking me how was I dealing with it. Dealing with what? -since I had no  
notice of new status”. Or the man approaching me in a club in Lima: he saw  
me dancing and came to me to give me a piece of paper and left without  
saying a word. The paper had his e-mail address and the message “add me”.  
These examples may show how social networks recreate a separated world  
that in some way has dominance over the real world. Perhaps we may even  
speak of network produced human relations as a vertical power accessing  
real life being reproduced in social network platforms.

Social networking is a form of production. Following Maurizzio Lazzarato,5life-styling becomes a form of capitalist production where capitalism co-opts  
consumers as life-style workers creating the conditions for commodities to be  
sold. The possibility of making a profile gives the impression of freedom to  
design what you are or the way you want to be seen by others, but it is hiding  
a deep fragmentation of human relations, of the way we relate to our bodies  
and the way we relate to the world. They produce an ideological environment  
in which to shape subjectivities, e.g. the Facebook community, to extract, and  
ultimately to profit, through profiling and data-mining.

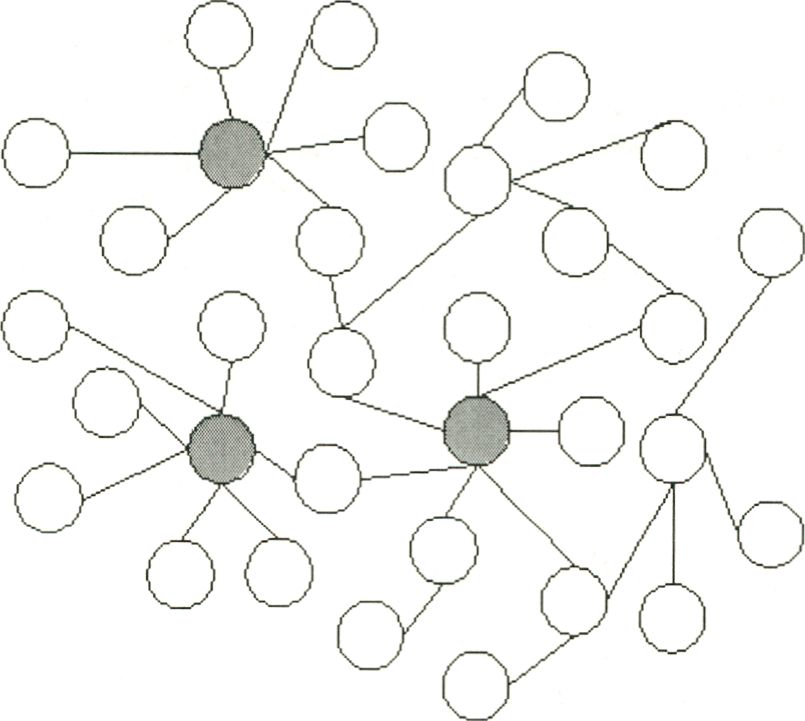
In Facebook the necessity of showing off your face, only a part of your body,  
the upper part where the eyes are, a section dominated by the visual  
dimension, has taken over other parts of the body, which is shown, here and  
there, as fragments.

As a “walled garden” this popular social network mall threatens openness  
from a cultural perspective, but it may also have an effect on the structure of  
the web. As Tim Berners-Lee warns, social networking sites that do not allow  
users to extract the information they put into them could mean the web is  
“broken into fragmented islands.”6 “The web evolved into a powerful,  
ubiquitous tool because it was built on egalitarian principles,” he said. “The  
web as we know it, however, is being threatened in different ways. Some of  
its most successful inhabitants have begun to chip away at its principles.”

Network vs Web and their origins

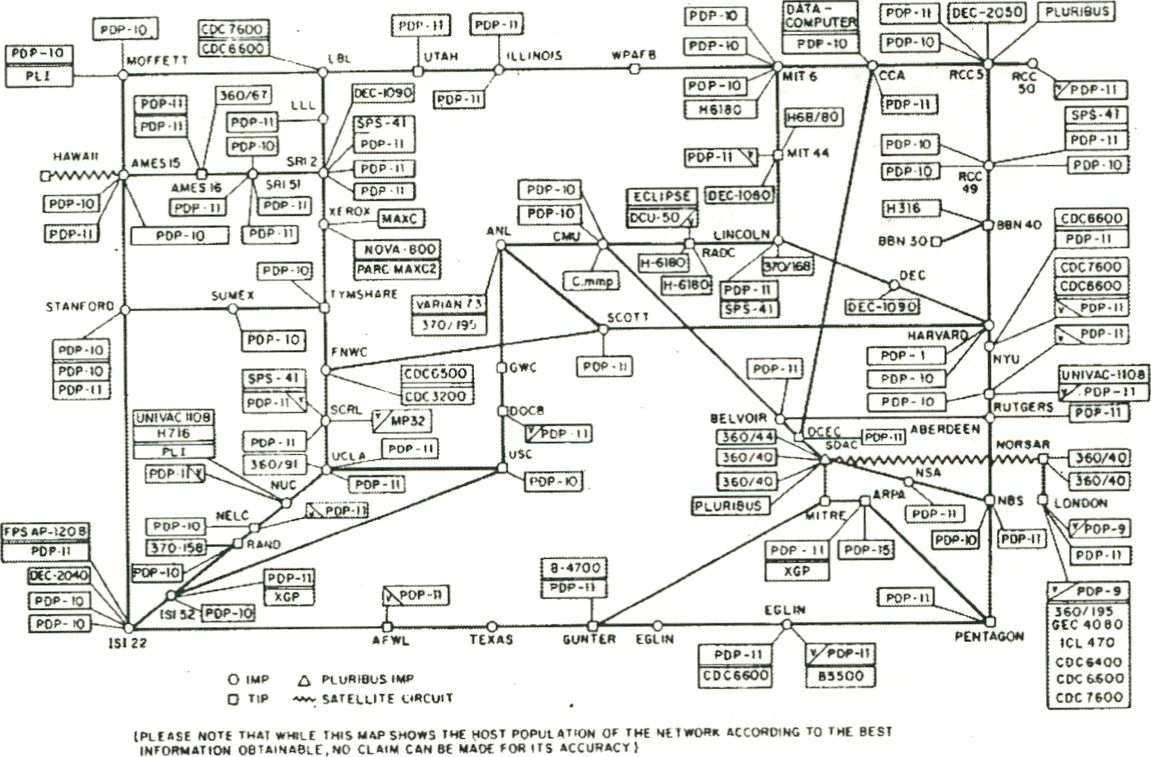
From its inception the Internet is closed. If we look for an origin, one source  
would be rooted in graph theory in the 18th century, in the mathematical  
definitions of Euler. “A graph” in its mathematical definition "is pair of sets (...)  
of vertices (nodes in a graph) and a set of edges denoting the links between  
the vertices.”7

One case is the model of scale free networks-“Barabasi and collaborators  
coined the term “scale-free network” to describe the class of networks that  
exhibit a power-law degree distribution (...) Scale-free networks are  
noteworthy because many empirically observed networks appear to be scale-  
free, including the world wide web, the Internet, citation networks, and some  
social networks.”8



A general consideration is that graphs are focused on nodes and that all real  
life networks are finite. Being finite co-ordinate systems, networks contain in  
themselves means of ideological control.

Another starting point to place the origin of the internet is the Advanced  
Research Projects Agency Network (Arpanet) whose military aims were based  
on survivalism. The network of networks was created so information could  
survive to a global nuclear attack."the arpanet was the world’s first  
operational packet switching network and the core network of a set that  
came to compose the global Internet. The network was created by a small  
research team at the Massachusetts Institute of Technology and the Defense  
Advanced Research Projects Agency (DARPA) of the United States Department  
of Defense.”9



We could explore as an analogy a model of a web as described by the  
shamanic geometrical designs of the Peruvian indigenous tribes of the  
Shipibo-Conibo. In their drawings they graphically describe a web based on  
the intertwined communication paths of all existing forms being animated or  
not.10 They draw these networks under the effect of psycho active  
endogenous plant agents and describe them as paths that interconnect  
everything to everything. They even see networks coming out of written text  
as in books. Their emphasis Is placed not in the nodes but on the paths, the  
Infinite relations between agents. Reality is then knitted through the flow of  
energy of this infinite web.

“Whereas we perceive these designs as visual abstractions, the Shipibo-  
Conibo perceive them as matrices of intersensory perception, since these  
geometric designs are at the same time musical scores and perfume recipes.  
They resonate in each of the senses at once. They are not simply addressed to  
the eye.”11



The contrast between western models of networks such as the Internet, and  
the aboriginal intersensory experience of an infinite web of relations, is drawn  
to make explicit the difference of dynamics between the two models of web  
and networks, by considering the latter as Iterations of well-defined relations  
with finite limits, versus a web of knowledge and a related freedom springing  
out of developing narratives through intoxication. Intoxication and infection  
are also related to the nature of text, words and writing (word is a virus  
Burroughs reminds us12).

There is liberty contained within the strings of text shared on the Web.  
Content is a filigree knitted through text, a soft layer that has the tendency to  
resonate and overcome limits.

Open standards carry within the historicity of technical developments. The  
cultural movement that has resisted closeness, the desire to overcome  
limitations imposed by elites over knowledge. There is something such as the  
open web as a layer working on top of close instances, that may improve the  
way we engage to daily life, people, work and knowledge. Considering this  
potential, why are you exercising your right to be in prison?

Dystopia, Open as propaganda

We may see there are, at least, two diagrams at work: one that is closed and  
finite, the Internet infrastructure based on protocols; and another that is  
open, the Web, that Is based on open standards which have sprung up from  
the unstoppable desire to open the way people and communities relate to  
information and to knowledge. There is a juxtaposition of diagrams where  
instances of open and closed gates are at work. The desire of being found in a  
Google Map, an opening gate, clashes with the corporate means of  
aggregating located information, a closing gate. Google Maps exemplifies the  
power and virtuosity of this optical system of control.

One looming threat to openness today is increasing access to the Internet  
from mobile devices. Mobile devices are a good thing of course, but they also  
create another opportunity for rent seeking from commercial players, who  
could introduce, for example, proprietary standards in the way they  
“mobilify” websites for access from smaller screens. This would affect  
everyone, but particularly people in developing countries just coming online  
now for the first time, whose Internet experience is more likely than not to be  
through mobile phones. In Jamaica, for example, more people access the Web  
from mobiles than from desktop or laptop computers, in a stunning case of  
technological leapfrog. There are already millions of smart phone users in  
China, not just the rich, but students who will save for months to buy a  
phone that gives them Internet access.

In 2009 the Chilean government made an agreement with a Malaysian  
telecom company to "illuminate" with wireless Internet all rural zones of the  
country using WiMAX technology.13 Their attempt was to provide free internet  
for three million people and in this way work towards breaking the digital  
divide. However the people living in the countryside, 13.4% of the population,  
have scarce knowledge of the Internet and low computer literacy. What may  
be seen in this case is that access to the Internet works as a command to  
progress. Technology will perform “illumination” with internet. Economical  
dependencies established by such an implementation are direct since the  
infrastructure is built as a free asset to later become a private paid service.  
This technology has been adopted as a blind command for progress without  
having a concrete plan for using it to increase economical production, even  
though this was the original intention. Earlier the government had vaguely  
envisioned developing educational initiatives. We can imagine that Internet in  
this type of arrangement and environment might have a low degree of  
adoption amongst the local community, so instead of bringing knowledge, the  
open wireless Internet infrastructure works as a propaganda of progress,  
destined to become open electromagnetic pollution.

1. This title is named paraphrasing Lewis Mumford essay "The Myth of the machine” "Mumford insisted  
   upon the reality of the megamachine: the convergence of science, technics and political power as a  
   unified community of interpretation rendering useless and eccentric life-enhancing values. Subversion of  
   this authoritarian kingdom begins with that area of human contact with the world that cannot be  
   successfully repressed-one’s feelings about one’s self.” Lewis Freid, Makers of the City, Univ  
   Massachusetts Press, 1990. p 115. [http://en.wikipedia.org/wiki/The\_Myth\_of\_the\_Machine](http://en.wikipedia.org/wiki/The_Myth_of_the_MachineA)[A](http://en.wikipedia.org/wiki/The_Myth_of_the_MachineA)
2. Alexander R. Galloway. Protocol: how control exists after decentralization. 2004. MIT Press.A
3. Volume I Technics and Human Development. Harcourt Brace Jovanovich Publisher, 1967. Edicion  
   sudamericana: Emece, Buenos Aires, 1969.

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   Society, 2nd ed. Malden, MA: Blackwell, p. 3, 2000.A
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4. Reuven Cohen, Shlomo Havlin, and Daniel ben-Avraham Structural Properties of Scale-Free Networks ,  
   2002 A
5. [http://en.wikipedia.org/wiki/Scale-free\_network](http://en.wikipedia.org/wiki/Scale-free_networkA)[A](http://en.wikipedia.org/wiki/Scale-free_networkA)
6. [http://en.Wikipedia.org/wiki/ARPANET](http://en.Wikipedia.org/wiki/ARPANETA)[A](http://en.Wikipedia.org/wiki/ARPANETA)
7. “Which are said to originate in the markings of the cosmic serpent, Ronin-are woven into textiles,  
   incised on pots and houseposts, painted on faces, and even recorded in folios which were supplied by the  
   first missionaries who made contact with the Shipibo-Conibo (see lllius 2002). However, their foremost  
   use is in the context of Shipibo-Conibo healing rituals. David Howes, 2006. p.76.A
8. The Aesthetics of Mixing the Senses. Cross-Modal Aesthetics David Howes (Concordia University), 2006  
   [http://www.david-howes.com/senses/aestheticsofmixingthesenses.pdf](http://www.david-howes.com/senses/aestheticsofmixingthesenses.pdfA)[A](http://www.david-howes.com/senses/aestheticsofmixingthesenses.pdfA)
9. The Electronic Revolution, essay collection by William S. Burroughs first published in 1970A
10. <http://www.lanacion.cl/prontus_noticias_v2/site/artic/20090318/pags/200903i82i0i29.htmr>

About This Book

This book was created in a Book Sprint over 5 days between January 17 and  
January 21, 2011 in Berlin.lt was an enormous achievement by the handful of  
people brought together to write a Book about the ‘Open Web’.

The sprint was unusually affected by a high number of last minute issues  
including some last minute participant and sponsor cancellations, denied  
visas, and two delayed flights to the sprint. As a result we started with a great  
team but a little smaller than anticipated.

The even was hosted by transmediale.il and the Collegium Hungaricum Berlin  
(CHB), based on an idea and concept initiated by transmediale artistic  
director Stephen Kovats and Adam Hyde of FLOSS Manuals. To write the book  
we used the FLOSS Manuals installation of Booki  
(<http://booki.flossmanuals.net>).

On the first day the CHB Director Can Janos Togay and CHB Curator Vera  
Baksa-Soos welcomed us and gave us an excellent introduction to the CHB. It  
is an amazing building and a very forward-thinking organization. It was both  
an honor and a privilege to be welcomed and hosted there. Our context for  
the sprint was very interesting on another level too. Hungary has a somewhat  
acute problem at the moment with self-censorship, free speech and open  
expression. The CHB is an adjunct organisation of the Embassy of Hungary in  
Berlin and therefore, technically speaking, not in Germany, but on sovereign  
Hungarian territory. Given the current debate in the EU on press and internet  
restrictions, there is considerable poetic irony that the Book Sprint about the  
Open Web took place there.

While waiting for Jon to arrive we started some light discussions about the  
book but we held back a lot, wanting to involve him in the process as much  
as possible. We started with a discussion followed closely by an injection of  
pizza delivered by Stephen Kovats. The conversation started with some  
wobbles. Most of us were confused by the proliferation of the term 'Open  
Web’ since any discourse of the net has abused both terms over the last  
decade. None of us really knew what ‘open’ was anymore or what is meant  
these days by ‘the Web’. What then was the ‘Open Web’?

Bassel Safadi, contributing remotely from Syria, gave us a clue. He outlined a  
stack of conditions that would lead him to agree to a web service being  
identified as ‘open’. Then the conversation turned to mapping this idea onto a  
book structure. Jon arrived around 1800 and we continued. After the first  
night we had a structure, but it was not complete. We still were not exactly  
sure what the open web was even though we could talk with some meaning  
about the conditions that needed to be fulfilled.

We started writing anyway at 10:00 the next morning. Everyone picked a topic  
and started putting their ideas down. The sprint facilitator (Adam Hyde) was  
pretty certain this book did not have to be long, and it could be simple since if  
we (relatively ‘old hand’) web users could not say what the Open Web was,  
and there is very little other literature out there about it, then a short clear  
book about the Open Web was going to be a good first step. It should be a  
strong attempt at setting up the parameters and defining the terms of this  
discourse.

Determined to succeed and scared of failure, we wrote. At the end of the day  
we had dinner and wrote some more and then realized we had a better idea  
of what we wanted to define. Book Sprints are noisy environments and  
throughout the day there were many discussions about issues and ideas we  
wanted to clarify, discard or write about. Hence after a day of this we had a  
better shared language for discussing the content and we were moving  
towards some kind of simple thesis. John West joined us for a few hours and  
wrote some material and discussed the introduction chapters in detail with  
sprinter Alejandra Perez. After dinner Jon Phillips, Chris Adams, and Michelle  
Thorne pushed for a rethink of the table of contents, and then we started  
getting closer.

The next day we made a few smaller tweaks to the structure and started  
writing. We carried on throughout the day with only a few breaks, finishing  
around midnight. We also asked for some feedback from people we knew.  
Overnight, a few comments were left by these people, most notably Mike  
Linksvayer went through the entire text and left some very useful and  
worthwhile comments. Aleksandar Erkalovic (‘Aco’-the lead developer of  
Booki) worked on integrating Status.net services into Booki so we could  
utilize microblogging. In the early evening Aco demonstrated basic  
microblogging functionality in Booki which was fantastic. Barry Threw also  
later demonstrated a visualization app that used the RSS feed of the  
developing book as its data source.

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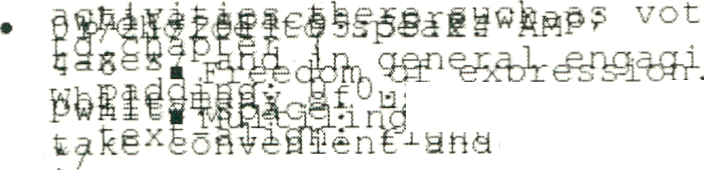
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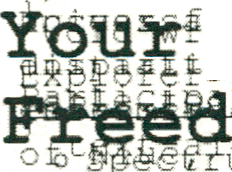
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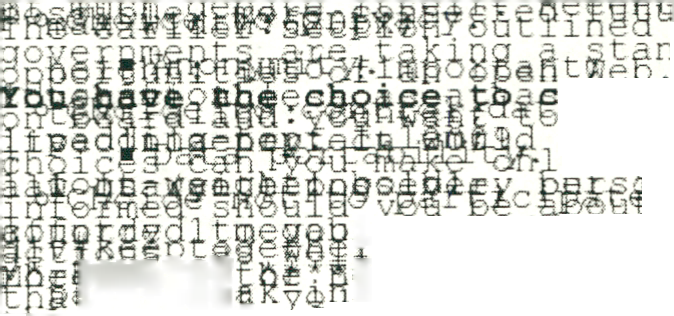


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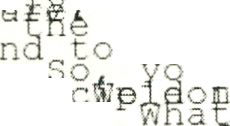
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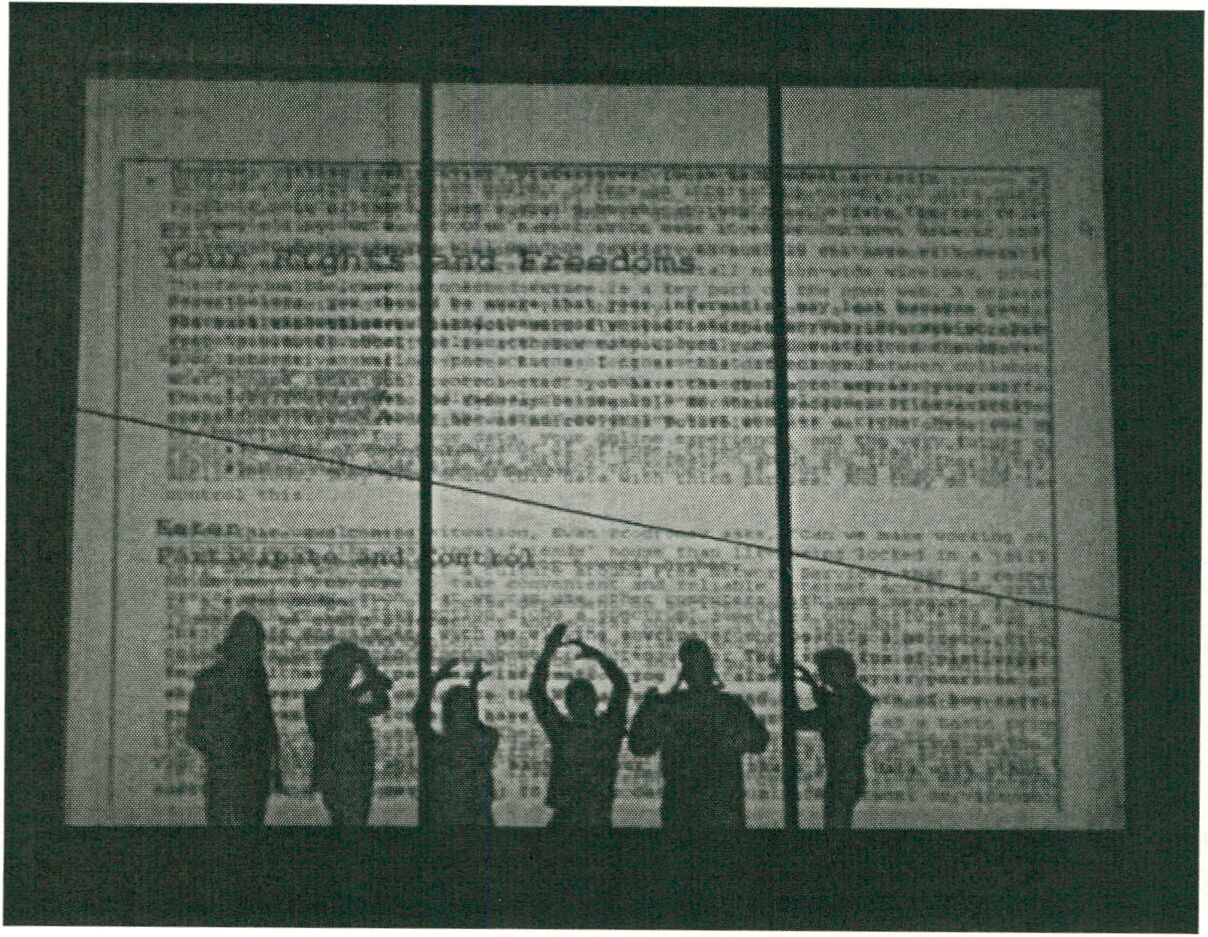
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Later Mick Fuzz woke us all to the fact that we needed to get a move on. He  
was not convinced we had enough material at this point of the sprint and he  
gently provoked a more thorough review of where we were. This was an  
important point of clarity that motivated us to start early and start strong the  
following day.

The fourth day we were in the zone and wrote well. The discussions became  
fewer but denser and closer to the source of what we wanted to say. We had  
already learned a great deal from everyone involved and brought our own  
ideas more sharply into focus. We had a few more people drop in remotely.  
Luka Frelih from Slovenia and Tuukka Hastrup from Finland popped in  
throughout the day with helpful contributions.

The last day. We shifted rooms, moving to the CHB ‘Panorama Hall’, an  
amazing space with a double story projection screen window, and started  
writing. Fabricatorz pushed the visualization forward and it was projected on  
this screen creating a live visual manifestation of the Book Sprint  
(<http://wall.fabricatorz.com/>).



We cut five chapters down (about freedoms) into a much more succinct and  
healthy chapter. We also had a lengthy discussion about a beautiful essay  
Alejandra wrote (included as the ‘Myth of Openess’ in the appendix) and how  
it did not seem to fit into the rest of the book. We wanted to include it  
because also Alejandra had been sprinting all week and because the essay had  
some very inspirational elements. We decided to include it and Alejandra  
finished the essay. Although its tone and content didn’t quite fit into the body  
of the rest of the book it is one of the best chapters so we believe it was a  
good decision! Then we just sprinted. 1900 16,000 words. Push the publish  
button, upload to lulu.com, distribute the epub, push to FLOSS Manuals-blog,  
email, spam. Done.

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Biographies

Below are the biographies of the sprint team that was onsite in Berlin all day  
all night:

Christopher Adams is a publishing professional and free  
culture advocate based in Beijing. He is a developer at  
\_J Fabricatorz and works with Neoteny Labs. Freesouls:



1 ^captured and released by Joi Ito was his first fully Creative  
Commons-licensed book project. Christopher is a co-  
. i founder of Sharism.org and a member of the Creative  
\*\* “iCommons Network. He graduated magna cum laude from  
Brown University with a degree in Cognitive Science. This is his first book  
sprint. Photo Joi Ito, CC-BY 2.0.

Michelle Thorne is the International Project Manager for  
Creative Commons. She organized the Free Culture Research  
Conference, and co-chaired Mozilla’s Drumbeat Festival on  
Learning, Freedom, and the Web, to forge the future of  
education. She co-founded the Awesome Foundation Berlin,  
a lightweight association to fund small projects. As a  
believer in making and doing things, she helped  
“chaordinate” the DMY Maker Lab and other DIY projects in Berlin and around  
the world. She blogs at thornet.wordpress.com and tweets as (ffithornet.

Mick Fuzz started life on the Internet in the go’s, helping  
organize and promote large messy European Free Festivals.  
Since then Mick walked a line between a fervent belief in the  
urgent necessity for autonomous, ecological, grassroots  
organizing and a vague post-industrial nihilism.



Both of these can probably be linked to living in Manchester,  
UK. He now spends his time doing Campaign/Community  
Media work (<http://clearerchannel.org>) and Community Gardening  
(<http://redbricks.org>).

Adam Hyde is the founder of FLOSS Manuals, project  
manager for Booki and Book Sprint facilitator. Adam has  
been responsible for pushing the Book Sprint methodology  
from a 3-6 month process to a 2-5 day process. Adam lives in  
Berlin and enjoys exploring the process of producing books  
from their birth as an idea to writing to design to binding  
and beyond. Adam is currently very interested in pushing  
the Book Sprint methodology into new content areas and exploring its  
boundaries as much as possible, adamtpflossmanuals.net



Alejandra Perez Núñez is an independent artist and a  
member of a diverse group of practitioners and writers  
examining the electromagnetic environment in relation to  
post industrial economies. As a noise performer working  
^ with FLOSS tools she participates in projects dealing with  
radio, connected performance and social science fiction.



—\_— I She has a degree in psychology and aesthetics and a M.A. in

media design. She is currently based in Valparaiso, Chile.  
<http://elpueblodechina.org>

Jon Phillips (<http://rejon.org>) is a developer devoted to  
contributing to society and building meaningful  
relationships. He is notable for creating communities,  
growing successful media projects and leading in the Free  
Software, Open Source and Open Content movements. His  
artwork, projects and research are presented internationally  
including at Cantocore Import/Export Guangzhou (2008),

Beijing Central Academy of Fine Arts (2008), Nelson-Atkins Museum of Art  
(2008), Inter-Society for Electronic Arts Singapore (ISEA, 2008), Wikimania  
Taipei (2007), Pixelodeon Conference American Film Institute (LA, 2007),  
Berkeley Museum’s Digital Culture 0101 Public Lecture (2006), SF MoMA (2004),  
University of Tokyo (2004), Korea Advanced Institute for Science and  
Technology (2004), UCLA Hammer Museum, USC AIM Festival IV (2003), and  
the Institute for Contemporary Art London (2002).



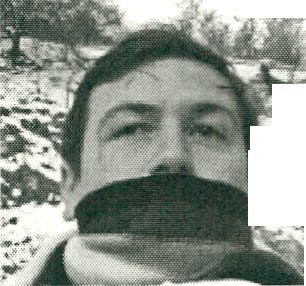
Bassel Safadi is a software developer and a 3D technical  
director with ten years of practic experience. He has  
extensive experience in open source development including  
Linux kernel and Apache server. He started web application  
development in 2000 and 3D visual effects in 2005. His latest  
work includes a 3D photo realistic reconstruction of the old  
city of palmyra (Syria), real time visualization, and  
developing a web programming framework (i.e., aikiframework). He  
graduated from Riga technical university (rtu) Faculty of Computer Science  
and Information Technology (Latvia), with a bachelor in computer science in  
2001. He has also obtained a M.Sc.lTfrom the University of Damascus (Syria)



in 2004.

Below are Bios of those that participated remotely and part-time onsite.

usfc Aleksandar Erkalovic is the lead developer for Booki. He is  
also renown internationally In the new media arts and  
activist circles for the software he has developed. Used to  
prSwork in Multimedia institute in Croatia, where he was the  
§¡2 lead developer of a popular NCO web publishing system  
j (TamTam), Aleksander has a broad spectrum of  
> programming experience having worked on many projects  
from multi-player games, library software, financial applications, artistic  
projects, web site analysis applications, and building systems for managing  
domain registration. Unsurprisingly, he is fluent in many computer languages  
and technologies.



Barry Threw (<http://www.barrythrew.com>) works globally  
to develop culture. He consults institutions and artists  
interested in exploring digital media through immersion and  
interactive media experience; combining sound, video,  
network, and audience interactions. Currently he works to  
present surround cinema with Recombinant Media Labs,  
develop interactive media with Obscura Digital, and free  
culture projects with Fabricatorz.



Appendices

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* Seda Guerses donated (vial email) a paragraph to the Rights and  
  Freedoms chapter.
* John West, Jonathan Kemp , Matthew Fuller, Luka Frelih, helped with  
  the development of 'The Myth of Openness'

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CSS:

body {

font-family: "fontin sans";  
background: #fFf;  
color: #000;  
font-size:12pt;

}

.objavi-chapter{  
color: #000;  
displaymone;

}

a{

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color:#000;

}

hi .initial{  
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displaymone;

}

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}

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font-size:l5pt;

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font-style:italic;

}

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page-break-before: avoid;  
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font-weight: normal;

}

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}

r toc «—«»«»«/

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}

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}

table.toc td{  
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}

td.chapter{  
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text-align: right;

}

table.toc td.pagenumber{  
text-align: right;  
vertical-aligmbottom;

}

td.section {  
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font-weight: bold;

}

/\* End TOC \*\*\*\*

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}

pre, code, tt {

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img{

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}

.objavi-no-page-break {  
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}

.unseen{  
z-index: -66;  
margin-left: -lOOOpt;

}

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The Web is Closed. The Future is Open

"As muck as we loue tke open Web, we're abandoning it."

Chris Anderson, WIRED Magazine

The Web was meant to be Everything. As the Internet as a  
whole assumes an increasingly commanding role as the  
technology of global commerce and communication, the  
World Wide Web from its inception was designed to be a  
free and open medium through which human knowledge is  
created, accessed and exchanged. But, that Web is in  
danger of coming to a close.



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