Who Needs the KGB when we have Facebook? An Interview with Eben Moglen

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For years, the network ideologist Eben Moglen cautioned that the Internet had become a tool of control and surveillance; a tool whose very nature endangers human freedom in an unprecedented way. Nowadays he forewarns: We have ten years before it becomes permanent. In an interview, he explains how the network structure impairs democracy and promotes totalitarian regimes, why Mark Zuckerberg paralyzed the basic right of human privacy more than anyone else in his age and why today's children are the only hope to stop him.

When it comes to his privacy, Eben Moglen is not willing to take any chances. The security system he set-up to surround his personal information online wouldn't embarrass the protagonist of an ultra-paranoid spy thriller, where government forces are constantly attempting to maliciously penetrate the privacy of ordinary citizens.

The wall he built includes eight encrypted servers, all of which belong to him alone, to run all his online activity. These servers communicate only with a limited number of devices, all of which belong to him and closely track against any attempts of intrusion. Moglen built them himself, with his own two hands, with parts he purchased separately. In cash.

Moglen does not own a smartphone—his phone is as ignorant as a shoe. His computer is a Chrome-Book, from which every sign of both Chrome and the cloud were erased. Of course, he does not own a Twitter, Facebook or Gmail account.

"Information wants to be free," that is the commonplace coined clichá" of the digital age. It is also the phrase spouted by all the network giants; it is their way of justifying their privacy practices. Nevertheless, Moglen is not impressed. "Notice" he points out dryly "that the people who defend their right to invade the user's privacy are also those spouting that phrase. They are also those that have the most profits to gain from using users' private information while keeping their information disclosed. The idea behind free information is the right idea: every mind on the planet should be free to learn. Unfortunately, those who are spouting that catchphrase don't mean it. They don't mean it in that sense. What they mean is"information wants to be free, so your information is the one that should be free so that we can make money off it". But they would never sacrifice their own privacy for that distorted version of freedom of information".

"Nowadays, most of us treat privacy as it were a worthless relic of the past. Gradually we are abandoning our personal information to anyone who will allow us to press"like" on a video of cats." Although Moglen may sound like a crazy man hiding from the world in a digital bunker, he sees it differently. "The funny thing is, I didn't intend it to be a bunker, it's my home," he says "I just built the most beautiful home in the world".

Fun & Capitalism

You could say that Moglen is a man who is anxious regarding his privacy, to say the least. However, contrary to the impression that was perhaps imprinted, he is not a spy. In fact, he is a lawyer. To be more precise, he is a Professor of Law at Columbia University and the Chairman the Software Freedom Law Center (SFLC), an organization he founded. The organization provides free legal advice to free software developers. He is also a man of technology, a hacker, a pioneer of the free software movement (founded by Richard Stallman in 80's to promote "free" software—software that anyone can use, distribute and modify) and its legal adviser up until 2006. He began his extraordinary career at the age of 14, as a programmer. In 1975, when he was 16, he helped develop the first e-mail system in the United States. Until he turned 26, which was when became a lawyer; he managed to become an integral part of IBM. There, he researched and developed advanced programming languages.

The rare combination of technical skills together with legal knowledge contributed to making Moglen a prominent network ideologue. A man respected on all sides of the technological community. This combination made him a legal history expert, who can—within minutes – list all the lawful, legal and technological challenges that stand between us and a free and democratic Internet. An Internet that respects the privacy of its users and does not seek to exploit them. An Internet which is free of manipulation, spyware and the control of governments and corporations.

According to Moglen, the Internet has become a tool in the hands of totalitarian regimes. A tool in which "digital geniuses who are deemed appropriate for recruitment, collect intelligence on the human race for capitalism and for fun" and in which civil liberties are violated by the government and private entities.

It is difficult not to be alarmed by his words. After all, Moglen was talking about these issues long before Edward Snowden leaked the NSA documents, which proved that he and every person such as himself, who had warned against the growing power of the surveillance state, were right.

In recent years, Moglen devoted much of his time to the persistent struggle against what he identifies as an unprecedented existential threat to the fate of democracy and human freedom. According to him, Snowden's exposure of documents demonstrated how the governments of the world have made the Internet a tool for surveillance and control, where every person is deemed guilty until proven innocent and in which the "machine" threatens to eliminate once and for all any possibility of independent judgment. A place where every person is exposed to monitoring at any given moment. A place that encourages people to spy on one another.

The person who has gained the most from all this espionage, who cultivated this pyramid scheme for his own profit and now holds an alarming amount of intimate information about a major fraction of the human race, is – Mark Zuckerberg. Moglen is highly concerned with the damages Zuckerberg pervaded upon the human race – "more than any other man his age" – he said in a lecture he gave at New York University (NYU) in 2010.

The headline of his interview with Forbes magazine in 2013 described him as one that "wouldn't use Facebook if you paid him anything less than a million dollars". The New York Observer journalist said he yelled at her because she had a Facebook account ("why would you call me to ask about a problem that you yourself are contributing to?" He asked, according to her).

Moglen describes the largest social network in the world as a large-scale spying machine, who offers its users a pretty bad deal – to store their personal page while also spying on them constantly—and managed to become a spyware titan, holding on to more personal information on the human race than any secret police of the 20th Century could have ever dared to imagine.

"Who needs Lubyanka when you have Facebook?" he asks, referencing the infamous K.G.B offices (afterward P.S.B) in Moscow. "In the old world they would put people into cells to try and find out information about someone. It was expensive, cruel and awful. Nowadays there is Facebook. You can spy on your friends a little bit, get spied-on a lot, and Zuckerberg spies on everyone while they're spying. If today every kid is a little spy and there is one supervising spy, who is the winner and who is the loser"?

And why do you oppose Facebook? After all, Google is equally watching us all.

"Facebook is just a poor way to do web. There is no technical need for the concentration of activities that Facebook is coordinating. It simply offers people a cheap way to build a home page; that's all. In return, Facebook keeps track of all network activity through its"like" button. Facebook is building the world's largest people database, then making this information available so that others can steal, borrow or threaten people with".

The Last Generation

Mark Zuckerberg's company does indeed hold information about the lives and social relationships of over a billion and a half people. Which is more than the KGB, Stasi and Securitate held combined. Every day, with every "like" we press, every time we surf online, on Facebook or any other site for that matter—the company collects information about our preferences—basically understanding who are we, as human beings.

A recent study done at Cambridge University and Stanford University found that Facebook knows us better than our friends, our family, and even our spouses. The researchers conducted a survey of eighty-six thousand users on Facebook; the subjects also received access to their "like-ing" activity. The result was an algorithm that used their "like-ing" activity to predict the subject's responds to the final part of the questionnaire. Finally, the algorithm created a catalog of the participants according

to five major personality traits: openness, awareness, extraversion, neuroticism and kindness. Subjects who were characterized by a high level of openness, for example, tended to "like" things like Salvador Dali or TED lectures. Subjects who were characterized as extroverts "like-ed" things related to parties.

Many of the subjects' family, co-workers, and friends were also asked to fill out a survey describing the personalities of the participants. Then the researchers compared the characteristics provided by the people and answers provided by the model. The results stunned the researchers: in each case, the computer model was able to identify the person's personality more accurately than his friends and family.

After ten "likes", the algorithm knew the subjects better than their colleagues at work. After seventy "likes", the computer was able to beat their friends and roommates. After one hundred "likes", the computer could be more accurate from a family member and after three hundred "likes", even the spouses were defeated.

The reason for this the researchers explained, is that we can lie to friends or family, but we cannot lie to Facebook: to lie to Facebook would mean that we would have to act differently in a systematic and organized way for years. "Like-ing" things that we do not "like", and essentially pretend to be somebody else. The vast majority of people, of course, are not so systematic.

This means that Facebook knows us better than the people closest to us do. So far, Facebook has not shown that it takes this conclusion seriously enough: in the early years, for example, there were scattered reports regarding the habit of Facebook employees who liked to entertain themselves by predicting which users would end up having sex. Basing their bet on the number of times the users had checked on each other profile and what kind of messages they sent. Journalist David Kirkpatrick wrote in the book he published in 2010 on Facebook ("The Facebook Effect"), that Zuckerberg himself liked to identify the pattern usage of its users. Over the years, Facebook's ability to identify what we do before we do it has become even more sophisticated.

Facebook uses all this information—just about everything we do online, even outside of Facebook—to sell advertising. Last June, for example, the company published a blog post, under the title "Making Ads Better and Giving People More Control Over the Ads They See". Facebook announced a dramatic shift: from now on, it will begin to follow the users' activity on other websites and applications, outside of Facebook.

Facebook was accused many times prior to this announcement regarding the fact that it monitors the activities of its users outside of the network, and even after the users' close the social network—but this was the first time the company openly admitted it. There are countless companies that monitor the activity of users outside their website, and Facebook is not alone in that sense, but because Facebook has huge quantities of users and holds an enormous amount of information, this practice is unquestionably significant.

"With your permission, I would like to ask the Israeli readers one question," says Moglen. "The ISA spends large sums of money trying to gather information on the life of every member of the Palestinian community in Israel and the Territories. It utilizes tax money to spy on Israeli Palestinians, for the security of the Jewish

community of Israel. There is no possible way in which the Palestinian Authority can compete to gather information on every Jew in Israel as efficiently as the ISA does, with one exception: Facebook. Facebook allows Palestinians to follow all Jewish citizens in Israel with a fraction of the money that it costs the ISA. You tell me—what is it good for"?

It's Not.

"In reality, Facebook allows any secret police intelligence agency in the world to upgrade their skills. Even if there is a secret police that you do trust, the bad news is that even the one you don't is on Facebook. Let me be clear: this does not mean that if you are in Egypt or Bahrain, the most dangerous entity to follow you is Mark Zuckerberg; the person you should fear the most is still the head of the secret police in your country. But the secret police do not have to do the all the legwork themselves anymore".

The scenario that keeps Moglen up at night, he says, is that nowadays humanity is building a network that connects the entire human race together, and the general public does not control how this network is designed. The result of which is that democracy diminishes as the network becomes a tool for every type of spy—both private and public.

"I'm not worried so much about Google & Facebook. They might not be here in the end. I'm more concerned about the architecture of the social network", he says. "The parts of the network that worry me are the ones that users aren't exposed to.

In practice, we have ten years left to oppose this current situation until it won't be effective anymore. The current generation is the last generation of humanity that will have free will. We have a choice. Today's young people can choose. But they will be the last human beings to be given that choice".

dotCommunist

Moglen was born in New Haven, Connecticut, in 1959; both his parents were in academia. His father (who died in 2001) was a writer and editor. His father wrote and produced TV shows and documentary programs about culture. His mother is a Professor Emeritus of English and Women's Studies, who previously served as Associate Dean of the Faculty of Humanities at the University of California at Santa Cruz. "Not computer scientists, not scientists. People who wrote and thought about humanity at large" says Moglen.

As a young man, Moglen says, he was not committed to social change as his parents were. "I was an academic historian. I thought of the law and history. However, over the years, my ideology became closer to my parents.

"I started in the realm of law as a young man, and at some point I realized that I should not write just about history, but also attempt to change it". Moglen has no children, and he was never married. In addition to Columbia University, where he now teaches, he taught for years at Harvard University and Tel Aviv University.

His career began, as aforementioned, as a programmer, at age 14. "When I was 15 I told my father that I have two brains, one organic brain, and one silicon brain and that one day both will converge. Then a new human species will begin to grow. Because the all the silicon minds will be connected to each other. He did not understand what I was saying and was very distressed".

"When I was 13 years old, I had a lot of time to think about the future," he continues. "Myself, Richard Stallman and others, we were a generation that was allowed to conduct very complicated things on computers without licenses or degrees since there were none. We started out early, and because we grew into it, we could contemplate the social ramification of what we were doing. The science fiction novels we read in our youth allowed us to develop a deep awareness of political problems. We learned about the technologica l problems because we built the technology ourselves.

"We realized that in the future there would be two classes of people: people who know how to change the behavior of computers, and those who don't. Those who do not will be slaves of those who did. This combination of technology and science fiction taught us to imagine that future. Since we weren't interested in that particular future, we actively did things to change it". Moglen worked as a programmer for over a decade. This work allowed him to pay for his studies, and in 1985, he became a lawyer. He interned for Judge Thurgood Marshall, the first African-American Supreme Court Justice in the United States and a leader in the struggle for civil rights in America. Early on, he realized that software was the steel of the late 20th Century – Just as the steel industry led to the rapid development of the early 20th Century, software became the basis for development in the 21st Century. And just as with the steel industry, the software industry is also vulnerable to draconian monopolies.

Moglen made his reputation as a champion for civil rights online. When Philip Zimmermann developed PGP, encryption software most commonly used in e-mails, he was investigated by the US administration. Moglen rose to his defense and served on his legal team. In January 2003, Moglen published a document entitled "The dot-Communist Manifesto". The document processed the defining document by Marx and Engels into the terms of fighting for a free culture in the 21st Century and called for, among other things "abolition of all forms of private property in ideas".

During the past years, Moglen attempted to warn people of what he identifies as an intrusion of totalitarian methods into the democratic system, under the umbrella of the digital technologies on which our lives are based. "In the 20th Century we were ready to sacrifice the big cities of the world and tens of millions of people in order to protect ourselves from regimes that we label as 'totalitarian.' In totalitarian regimes, we recognize that the state had become so powerful and intrusive that it no longer acknowledges any boundaries when it came to the individual's private life, and the state gives itself license to intervene in any activity its subjects take part in. In these regimes, the state listens to every phone call and follows the troublemakers and their acquaintances. Well, in the last ten years the country has begun to strengthen mechanisms of totalitarianism on the foundations of a democratic society", said Moglen in a series of lectures delivered in 2013 entitled "Snowden and Future".

In a series of lectures (available for viewing and reading online, and which summary is published in the British "Guardian") Moglen explains how all humanity had

fallen prey to an invasive system whose sole purpose was to spy on them. Further, that without privacy there can be no democracy."

Our concept of "privacy" combines three things: first is secrecy, or our ability to keep the content of our messages known only to those we intend to receive them. Second is anonymity, or secrecy about who is sending and receiving messages, where the content of the messages may not be secret at all. It is very important that anonymity is an interest we can have both in our publishing and in our reading. Third is autonomy, or our ability to make our life decisions free from any force that has violated our secrecy or our anonymity. These three - secrecy, anonymity, and autonomy are the principal components of a mixture we call "privacy.""

Nevertheless, privacy, says Moglen, is the very thing we do not enjoy today. "What happens is that the technology supports totalitarianism," he explains. "Maybe it's not happening to you right now if you live in a country where the infrastructure does not exist, but once it starts, it cannot ever be stopped again. Because once the network becomes a tool of despotism, tyranny becomes immortal and is very difficult to suppress because it will know what you're going to do before you do it".

Convention of Snoops

As if to prove Moglen is right, in February 2015, Kaspersky Lab, a software security group, revealed that agents of the NSA hid an NSA spy program in the hard drives of some of the biggest producers in the world.

Shortly prior, the British Prime Minister David Cameron continued to promote a controversial legislative initiative. If the initiative will pass, it will prohibit encrypted communication and will grant the government unprecedented power to monitor the activities of citizens online and on their mobile phones. It will also force American companies, such as Facebook and Google, to closely monitor the activities of their own users in order to provide information to the proper authorities.

Further, in June, Section 215 of the Patriot Act is set to expire. This section grants agencies such as the NSA and the FBI far-reaching powers to monitor phone calls of millions of American citizens. But Congress has the authority to extend the term of this section as it did time and time again since 2002. The White House declared the controversial section as "critical security tool".

The official motive for all these spy software is, naturally, the war on terror. "If I am prime minister I will promote a comprehensive piece of legislation that makes sure we do not allow terrorists safe space to communicate with each other", said Cameron in a speech in January to the British Parliament in which he declared on the new legislative initiative. This legislation was dubbed by the British press as the Orwellian "Convention of Snoops". Cameron used the attack on the "Charlie Hebdo" editorial, which took place just a few days prior, as the justification for implanting the new program.

So far so good. After all, who doesn't want to fight terrorism? The problem is in the definition of who is a terrorist and the question of when, if ever, these powers of espionage expire. "This political necessity in the current reality: everyone wants to be tough on terrorism. The problem is that governments are looking to make the

Web a place of permanent war. When we are in a state of peace, people's secrets are their own. But when governments speak about a permanent solution, so that no one will ever have any secrets, this is a sure recipe for a totalitarian government. Even during wars, we must not forget about peace. That peace must always arrive after the war and war in other circumstances is immoral".

According to Moglen, all spyware produces one result: we are all are treated as suspected as terrorists, which means we lose our basic right to privacy, until we are proven innocent by those who are monitoring us. "Today, every airport in the world pegs us all as a possible threat until they prove otherwise, and in the network we are treated as terrorists and enemies of the state. If we are lucky, we are not persons of interest to any government, only advertising platforms".

Advertisers are the flip side of the espionage coin. They complete the total penetration into the private space that was once our own. An experiment conducted in 2010 in the "Wall Street Journal" demonstrated just how public our personal information is to commercial interest groups. They did so, when reporters bought a "clean" computer, which never used the Internet. They then surfed the United States fifty most popular sites. And the result: 131 publicity companies planted 2,224 secret files in an attempt to latch onto the browsing activity and try to put together a profile of the owner's characteristics. Characteristics such as his age, race, marital status, income, health, and movie preferences. Even deleting the harmful files did not help; they just re-planted themselves into the computer.

Spying became the default from any service provided to us. Samsung, for example, caused a stir recently when it published an unusual warning for their smart TVs' users. Samsung's Smart TVs have a feature that allows them to be controlled by owner's voice. The problem: if your Smart TV is in the living room, maybe you should speak about sensitive issues in other rooms since the device is listening and taking notes. "Please be aware that if your spoken words include personal or other sensitive information, that information will be among the data captured and transmitted to a third party through your use of Voice Recognition", warned Samsung.

The third party is a Nuance, the company that provides a voice recognition technology of the devices. And if the last paragraph reminds you of the big brother's Telescreens from "1984" by George Orwell, those that are always used as the watchful eye of Big Brother and record the every note and movement of every person, you are not alone.

"In two generations from now," says Moglen, "there won't be any espionage agencies. There won't be the NSA or Google. There will only be us and the machine. The machine will not be controlled by someone like you or me. In the next two generations, all humankind will merge to create one nervous system connecting us all together. But this connection won't be working for me or you, it will be working for someone else. Democracy will be eradicated, and the civil rights abolished. What we call"freedom" will cease to exist. It will be replaced by a product that you might be allowed to purchase".

But aren't we already controlled by machines? It seems as if even today we don't have a lot of freedom.

"We're still not controlled by the machine. We have free software. I do not use those things. They don't control me. When I function independently, through

servers that are only mine, who speak amongst themselves in encrypted form and through which I access my mail, my browser activities and my phone calls, I'm actually more secure than I was in the 20th Century. They still have to sweat in order to find me, and that's how it should be. They are supposed to sweat. It's not my job to protect myself from them, it's their job to find people who are dangerous and take care of them, and it should be hard".

Don't companies like Google, Apple, Facebook, and others fight for our right to privacy against the government? They firmly refused to cooperate with the demands for information from leaders like Cameron.

"It's a battle that's convenient for both parties. Apple doesn't encrypt the calls themselves. It only encrypts the iPhone address book. Google doesn't encrypt the calls themselves. It can't, it only encrypts the Android address book. In the world today the important information isn't on the phone itself. It's owned by third parties. In this war, the companies can stand on the right side of it and show that they are fighting for the privacy of their clients. The real negotiations are left open – how much assistance are they providing the governments behind closed doors. Companies protect their assets, which is their knowledge their users, their people, and the government views those people as a threat. In both cases, the parties only defend their police force".

Here's the problem with the claim that all these services undermine democracy: Facebook, for example, has already helped to spread democracy in Egypt and Tunisia. The Arab Spring would never have happened if not for Facebook and Twitter.

"Tunisia's government wasn't brought down by Facebook. It was brought down by WikiLeaks, who published information about the corruption of the elite Tunisians. But those tools can be used for all different types of purposes. In Egypt, young people were revolting, creating an environment for new media and began a trend of young people in the Arab world who write and publish themselves. It was a good use of those tools".

"Now the same tools were also used to capture, investigate and sentence to death hundreds of people, just because they were in the audience where a policeman was killed and were photographed, and that picture began circling online. The Egyptian state can use those tools as an opportunity to send these people to prison for the rest of their lives". "In the case of the protests in Bahrain, the Americans and the Saudis chose to help the police find people and hurt them. People died because they held cell phones and used Facebook".

Even in Israel, when the social protest was born in Facebook, the police then proceeded to use Facebook to spy on the activists.

"So that even in a tiny state where everyone is talking with everyone there is still an advantage to spying with Facebook. So we agree that the network is a very powerful tool".

Freedom in the Cloud

In 2010, Moglen inspired four young ideologists who're aim was to break once and for all Facebook's monopoly. It was after a lecture he gave at NYU titled "Freedom

in the Cloud" which soon after became a legend. In that lecture, Moglen described for his listeners how the network had become an intricate web of espionage, and at its core stood a basic injustice: "consumers without rights on one hand and on the other hand companies and organizations monitoring their every action".

"So, of course, I didn't have any date tonight. Everybody knows that. My calendar's on the web. The problem is that problem. Our calendar is on the web. Our location is on the web". Moglen said in that same lecture, right before he described how the cellular companies can pinpoint every location of every one of its clients, in real-time. He also described how these companies willingly provide that information to the law enforcement bodies. The companies provide the information willingly, without a trial, without supervision, "just because".

Moglen said those things three years before Snowden proved how vulnerable our private information was for the sophisticated monitoring capacities of government intelligence organizations. "The deal you get when you sign up for the regular cellular packaged known as"Telephony," includes another service you weren't aware of: espionage. It's not a service you receive anything from, but it's free, along with your contract".

The basic model is a business model upon which almost all online models are now based upon. It is the foundation upon which rests the economy of "Web 2.0". Which is the second generation of the network, that includes "platforms" such as Facebook, which is based on "sharing". "And you get free email service and some storage which is worth exactly a penny and a half at the current price of storage and you get spying all the time. And for free, too", said Moglen in that same lecture.

"The process that led to the situation where we don't have any kind of private or real protection from the law in our digital lives," explained Moglen, "started to happen long before Facebook. It originated in the crucial architecture of the network itself. The network itself developed a digital infrastructure that made it easier for becoming a tool in the hands of spies".

"Originally", he explained, "even as it made its digital first steps in government laboratories and universities in the 60's of last century, the Internet was designed as a peer to peer network ("Peer to Peer"). I.e. the network was distributed in a way that enabled the computers to communicate with each other without the mediation of a central factor". " OF course," he said then, "it never really really really worked out that way. There was nothing in the technical design to prevent it. Not at any rate in the technical design interconnection of nodes and their communication. There was a software problem. It's a simple software problem, and it has a simple three syllable name. It's name is Microsoft".

"Conceptually", he explained "the Internet" designed as a network of peers without any intrinsic need for hierarchical or structural control and assuming that every switch in the Net is an independent, free-standing entity whose volition is equivalent to the volition of the human beings who want to control it. However, the software that came to occupy the network was built around a very clear idea that had nothing to do with peers. It was called "server client architecture"." "Web users went from colleagues to customers, whose actions – either email or browsing – was in fact routed by central servers. Those servers gradually became more and more dominant, and with that fact, the consumer's autonomy gradually lost its meaning".

"The idea that the network was a network of peers was hard to perceive after awhile, particularly if you were a let us say, ordinary human being. That is, not a computer engineer, scientist, or researcher. Not a hacker, not a geek", said Moglen in his lecture. Swiftly the landscape of the web shifted into that of viewing the person as a customer, second in hierarchy to the servers that make up the web and hold within them a vast amount of knowledge and power.

"It was at that period that the servers started recording every action. The idea was simple, and it wasn't evil: saving and documenting (through logs) to help prevent bugs and optimize the system. But when it comes to a centralized system, those logs then became the documentation of any action the users performed, include their history on the network, every site they've ever visited, every academic article link or which porn movie they viewed."We aggregated processing and storage increasingly in the middle and we kept the logs - that is, info about the flows of info in the Net - in centralized places far from the human beings who controlled or thought they controlled the operation of the computers that increasingly dominated their lives", said Moglen."This was a recipe for disaster."

Therefore, without meaning to, the architecture of the network now makes it incredibly easy to monitor the users' actions. Importantly, all these decisions which have had a profound impact on our lives, were made without any public discussion about the long-term social consequences, by computer scientists, most of whom are not interested in sociology or civil freedoms.

The groups that had the most to gain from the problematic architecture were the advertising companies. "Advertising in the 20th century was a random activity. You threw things out and hoped they worked. Advertising in the 21st century is an exquisitely precise activity. You wait for a guy to want something, and then you send him advertisements about what he wants and bingo it works like magic". Those same logs became, along with the development of search and advertising (two activities that, because of the reasons aforementioned, became inseparable), into a goldmine.

"Browsers became the product of advertising," he now says. "We've moved from a world in which technology was made by geeks for geeks, towards a world where the browser companies - - with the exception of Mozilla (Firefox browser developer, AS) - - are now advertising companies. We've moved towards a world where billions of web servers are concentrated in only a few hands".

"At this point in time, the logs of those servers in which most people are basically wasting their time, began to record a significant amount of human behavior on the network. Once that happened, these companies became major intelligence services, whether they wanted to or not. And as soon as they become major intelligence services, the small intelligence services, namely governments, began to pay attention".

"The world's largest economies," he continues "are today's economies of consumption." "Two-thirds of the United States' GDP is due to consumption. In an industrial economy, you focus on materials: you check where the oil is located; you search for efficient ways to produce aluminum. On the other hand, when your economy is based on consumption you stop studying manufacturing but rather you focus on consumer monitoring. Focusing on prediction of consumer behavior and finding minor ways to influence consumer behavior becomes the foundation of the economy.

So that instead of giving everyone an email service that costs five dollars, you give them a free Gmail account so that you can read their emails forever. In fact, you collect not only everyone's emails on Gmail account, but also the emails of everyone who is communicating with people who use Gmail. You collect all this information to predict human behavior and learn about consumerism. That is when the network became a spy, whose main function was read individuals' mind in order to make these companies a fortune".

The cloud means that we cannot even point to the direction of the server anymore and because of that, we basically lost all reliable means of control over the servers. He explained in that same lecture in 2010. We've lost the ability to regulate what happens inside the servers. Because the servers aren't a physical object anymore. Or in the words of Moglen: "You can make a rule about logs or data flow or preservation or control or access or disclosure but your laws are human laws and they occupy particular territory and the server is in the cloud, and that means the server is always one step ahead of any rule you make or two or three or six or poof! I just realized I'm subject to regulation, I think I'll move to Oceana now".

"It is here, of course, that Mr. Zuckerberg enters" explained Moglen. Facebook, as aforementioned, arrived at a late stage of losing our digital autonomy as a human race. But it represents the alarming conclusion. Facebook created nothing new, but it managed to "harness Friday night" our basic need for human interactions and finding a romantic partner and transformed that need into an espionage machine. "Mr. Zuckerberg richly deserves bankruptcy - - Let's give it to him. For Free". Exclaimed Moglen to his audience, encouraging them to create a better social network than what Mr. Zuckerberg had created.

Maglen's words that night didn't fall on deaf ears. Early in 2010, Facebook was a huge cultural phenomenon with half a billion users, but its monopoly on our social interaction network still does not seem immortal. "The Social Network," a film by David Fincher about the origins of Facebook, didn't paint Mark Zuckerberg as one of the most prominent cultural heroes of the 21st Century.

Four students from the Institute of Mathematical Sciences at New York University, Ilya Zhitomirskiy, Dan Grippi, Max Salzberg, and Raphael Sofaer, who attended Moglen's lecture or watched it on streaming, decided to implement his advice and set up a network, to symbolize a new type of social media; one, where information isn't stolen from its users and that users, are not a product.

This social network called Diaspora, and its purpose was to win the battle against what its founders called "monetization of the soul." It was conceived as a freeware idealistic project, deeply rooted in the counter-culture movement of the free software, open source movement, and the Electronic Frontier Foundation (EFF) for the individual rights on the network.

The beginning of the project was magnificent: the four founders were able to raise two hundred thousand dollars, via Kickstarter, from 6,479 supporters from around the world (including one Mark Zuckerberg, who donated a thousand dollars and said, "I think it is cool people are trying to do it").

The rest of the story, as was documented in a book by "New York Times" journalist, Jim Dwyer, "More Awesome Than Money: Four Boys and Their Heroic Quest

to Save Your Privacy from Facebook", was less optimistic. The founders of Diaspora became overnight technological celebrities. Proceeded to drop out of school and moved from New York to San Francisco. They quarreled regarding personal and ideological decisions, unsuccessfully tried to play the venture capital game in the Silicon Valley and launched a preliminary version of the Diaspora, which was met with a cold shoulder.

The story ended in tragedy: In November 2011, Zhitomirskiy committed suicide. His death left the remaining founders stunted. They eventually abandoned the project to be run by the Diaspora community of users, who develop and manage it since. The social network has about 1.1 million users and still exists. Its user community runs it as a non-profit, under the umbrella of SFLC, Moglen's umbrella organization.

Diaspora is based on personal web servers ("pods") that allow users to connect via their own servers and communicate directly with their friends, sans watchful eyes. Messages can be imported to other social networks, such as Facebook and Twitter, but the decentralized structure ensures a safe distance from prying eyes.

In a cruel irony of history because of its decentralized model that allows users to disguise their location, the project had become popular amongst organizations such as ISIS. Last August, after being "blocked" from platforms such as Facebook and YouTube, the organization turned to Diaspora to upload and distribute the video of the beheading of the American journalist James Foley.

Should we now brand Diaspora as a failure? Facebook is still running, and the platform that began as an attempt to promote freedom has become a favorite of the ISIS.

"Diaspora is still running, it didn't fail. That project was founded by four people and became the child of many and Ilya died. That's what this story means to me. I don't read anything more into it, and I definitely don't read anything less".

Unequal Hi-tech

At his core, Moglen is an optimist. Although the present is at a somewhat sad state, he believes that victory is not only possible but certain. In the mid-90's, his optimism led him to Professor Yochai Benkler at Harvard University to offer a program that was supposed to advance the peace process or at least the co-existence between Israel and the Palestinians.

"It was in the midst of the 20th Century madness," he says. "We said to people"Look. There's going to be peace here. Let's install the foundation of fiber optics everywhere and connect Israel and the Palestinians in a large network. There are two big advantages in it for you: first, you can monitor to it all, and second, when you leave the territories, that was when we thought it was possible, you'll leave the network behind you. This will be the key to the Palestinians' future. No one would dare to destroy it, or hurt it. It will be their ticket for integration into the economic and political world. To my disappointment, it did not happen when it could have, before the Second Intifada. Since we did the presentation in English, someone from the Hebrew University said: "Americans are so idealistic"."

The last time Moglen visited Israel was 15 years ago. Before that, he often came. "I didn't expect it would take me this long to go back", he said, "It just happened". Having said that, he did leave Israel with mixed feelings about the local technology scene. "They didn't want to build the kind of institutions in Israel that people of my generation were building," he said. "What happened in Israel was that the technology arrived one generation too late. Instead of being part of the vision of a socialist Zionism, it became part of a culture that creates traffic jams between Haifa and Tel Aviv and the Tel Aviv and Jerusalem. The culture of Israeli technology has chosen the path of ownership, instead of sharing. Those same twelve people from Ramat Hasharon, who made a good career in the army wanted to make a lot of money and sell their company to Google. As a result, the culture of the Israeli start-up implanted itself in all the ways in which Israel had become unequal".

Even if he is a little less optimistic regarding Israel, Moglen continues to be optimistic about the future of democracy and privacy. One of the main ideas he has been promoting in recent years is FreedomBox: a small personal server, the size of a mobile charger. That anyone can take with them and use it so that their privacy can be preserved, and their information will stay safe. The idea is the cornerstone of the new network ideal that will be freer and more democratic that Moglen seeks to promote. "What do we need?" He asked at a lecture at NYU in 2010, "We have a very good server, you can put in your pocket and connect it anywhere".

As aforementioned, Moglen is taking far-reaching measures to procure his privacy. "What I do, is what an expert should do," he says. "If I'm using others' servers then I'm at their mercy. In my security system today, the attack surface is very small, through which someone can hurt me, and it is made entirely of glass and consists only of things I put in there, things I know where they came from. And in this surface or arena I could, perhaps, stand up for myself against the best tank commander on the other side".

Not everyone can build a server with their own two hands.

Nor should they. The beauty of capitalism is that the price of the server keeps getting cheaper all the time. Year-to-year it becomes more affordable to buy your own server. Marx was right: The endless effort of the bourgeoisie to make money can eventually lead to freedom".

Can you describe a better internet then the one we have today?

Yes. It will be peer to peer, and not a giant supermarket, but an actual market; I sell to you, and you sell to me, no matter where we are in the world. Our scale will diminish. We won't need the cloud. What I have to offer the world can fit inside my personal server, which I can plug into my wall at home. And that's it. The result will be the web leveling the playing field, removing boundaries and diminishing complexities, ultimately making people freer".

Are you optimistic about the chances of that coming into being?

Absolutely. All over the world today younger brothers are watching their older brothers uploading their entire lives into Facebook and the younger brothers are saying to themselves - my brother is crazy, I would never do that. In 2004, in a speech I gave in Berlin I said that we are only keeping the food warm until the children return home. Well, those children have now returned. Edward Snowden is one of

those children, who are changing the world. We are about ten years from the picture of the future that I have just painted. Ten years. And the clock starts now".