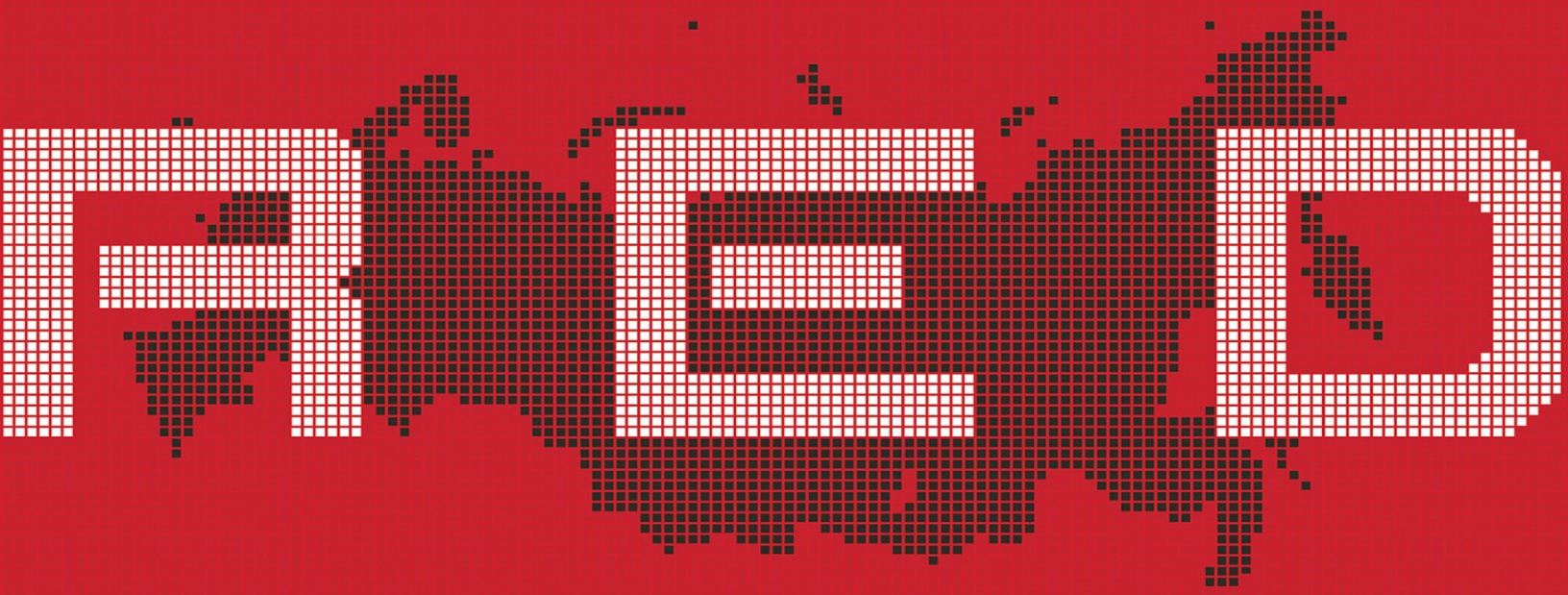
THE RED WEB

THE STRUGGLE BETWEEN RUSSIA'S DIGITAL DICTATORS *and* THE NEW ONLINE REVOLUTIONARIES



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“Information wants to be free.”

—Futurist Stewart Brand

“This is not a phone conversation.”

—a Russian expression meaning a wish to discuss something in person because somebody else might be listening

Chapter 14. Moscow's Long Shadow

On November 21, 2013, Mustafa Nayyem, a thirty-two-year-old liberal television journalist, had been deeply disappointed by Ukrainian president Viktor Yanukovych's decision to postpone the integration of Ukraine into the European Union. Yanukovych hesitated to sign an agreement with the EU because of pressure from Vladimir Putin, who wanted to hold Ukraine close to Russia and opposed any pact with Europe.

Nayyem posted an angry message on Facebook. "Well, let's get serious," he wrote. "Who today is ready to come to Maidan before midnight? 'Likes' don't count. Only comments under this post with the words, 'I am ready.' As soon as we get more than a thousand, we will organize ourselves."

This Facebook post started the Ukrainian revolution. Thousands went to Independence Square, popularly known as Maidan, and stayed there. In the months that followed, the Maidan was turned into an improvised fortress, surrounded by barricades, fires, and smoking tires and guarded day and night by protesters. The protesters wanted closer ties with Europe—a sentiment that was shared by part of Ukraine's population, largely in the western portion of the country, whereas the east felt aligned to Russia, not in the least because most spoke Russian as their first language. The protests in Kiev were a seminal crisis for Putin, who felt a move by Ukraine toward Europe would be intolerable—it would bring the West to Russia's borders.

On November 30 the Ukrainian riot police, the Berkut, launched an offensive against the protesters on the Maidan, and dozens were severely beaten. The protesters were forcibly dispersed. Some of them took refuge in St. Michael's Cathedral, an elegant gold-domed monastery not far from the square. The police then besieged the monastery.

Sasha Romantsova worked at a bank in Kiev, but she harbored the soul of a popular organizer. At twenty-seven, she had already successfully created a large student movement at her university and was deeply interested in events at the

Maidan. She had joined one of the first marches in favor of Ukraine's integration with Europe.

When the protests were dispersed into the monastery, Romantsova received a desperate text message from a friend hiding inside, who said the Berkut were battering down the monastery's doors. Romantsova was frightened for her friend and angry at the use of force against the protesters. She called the Center of Civil Liberties of Kiev and volunteered to do something—anything—to help to defend the protesters. The center, based in a residential apartment in the center of Kiev, was at that moment thinking the same thing; a workshop was under way on human rights. They decided to form a volunteer service to help locate the detained and wounded from the Berkut crackdown and to open a telephone hotline to gather information from those in trouble.

But one of the most important decisions made that day was to open a group on Facebook, called Euromaidan SOS, which immediately gathered over ten thousand followers. When Romantsova called the center to volunteer, she was told, "We opened a phone hotline, and we need a volunteer to sit here from 4:00 a.m. to 8:00 a.m." Romantsova enthusiastically accepted. She had to be at work at 9:00 a.m. but was more than willing to work the hotline for four hours first. She stayed there for months during the Maidan uprising, shuttling between the office and the hospital where the wounded were treated. When a few radio stations and a major television channel advertised the phone numbers for the hotline—actually three cell phones—the project expanded rapidly. It began with the intention of locating casualties, but it soon became an information service, fielding calls from all over the city. People called in to report eyewitness spottings of the Berkut, which were then posted on the Euromaidan SOS page, asking those who lived nearby to verify them and report back.[1]

To an extent this must have made Putin pale—the digital pathways were enabling the protest against authority. The Euromaidan SOS experiment on Facebook took advantage of the horizontal structure of a network, allowing people to share information readily and disseminating it where it was needed without the need for an established organization behind it. What happened in Kiev was reminiscent of Relcom's request in August 1991 for users to look out their

windows and report back troop movements, but this time it was not e-mails but Facebook that provided the platform. The authorities knew where the Euromaidan SOS was based, but the speed of the network took them by surprise. The Euromaidan SOS group on Facebook thrived and grew with the protests. Soon Euromaidan SOS had created comprehensive lists of the wounded or those missing or detained by the Berkut, and the lists were frequently checked and updated. Along with Romantsova, 250 volunteers worked on Euromaidan SOS, searching for the missing and keeping a direct telephone line open to the Maidan protest organizers on the square. Regular announcements were made by megaphone at the square regarding those who were missing or detained.

Yet there was a dark side to this political conflict: the digital pathways that enabled protest could also be used against the protesters. The night of January 21, 2014, was frosty and only about 10 degrees at the Maidan. Most of the protesters were sleeping in tents. Suddenly, *all* their cell phones vibrated with a new text message. The number was disguised as a service message, and it read, "Dear subscriber, you are registered as a participant in a mass disturbance."

The identical message went to users of each of the three mobile operators in the city—Kyivstar, MTS, and Life. But it went only to people who were on Independence Square. The phrasing of the message echoed language in a new Ukraine law that made it illegal to take part in a protest deemed violent. The law had taken effect that very morning.

The sense of the message was clear: the protesters had been identified. The text message was a means of intimidation.

Romantsova also received the text. She wasn't taken aback by it, but she and the protesters saw it as a new trick by the authorities against the protesters. Many of the Maidan protesters quickly took a screen shot of the message and posted it online—the network answered back, defiantly.

In fact, the texts appeared to have little effect. The text messages outraged many Ukrainians and were widely reported.[2] All three Ukrainian mobile operators

immediately denied they had sent the text messages. So the question emerged: If the message was not sent by the mobile operators, how it was done?

Kyivstar suggested that it was the work of a "pirate" cell phone tower set up in the area. This could have referred to something called an IMSI-catcher, a device that can emit a signal over an area of nearly four square miles, forcing hundreds of cell phones per minute to release their unique IMSI and IMEI identification codes, which can then be used to track a person's movements in real time. Every phone has such identification codes, although most people are not aware of it. This technology also can be used to intercept text messages and phone calls by duping cell phones within range into operating with a false cellular tower. A transceiver around the size of a suitcase can be placed in a vehicle or at another static location and then operated remotely by security agents wirelessly.

However, the telephone carriers could offer no evidence that a pirate tower was used, but there is another possibility: SORM—the black boxes, which can monitor both Internet and cellular communications—could identify the protesters and send the message. If security services had SORM, they could use it as a back door into the Ukrainian mobile networks, giving them the ability to carry out such an operation without being detected.

A fascinating clue then emerged. A Kiev city court had ordered Kyivstar to disclose to the police which cell phones in their network were turned on outside the courthouse during a protest that occurred on January 10.[3] The warrant, No. 759, which we obtained, was issued by a Kiev district court on January 13. Its goal was to identify people in the particular area of the protest. Further, the police specifically requested that a representative of Kyivstar be excluded from the proceedings to keep the operation secret. The judge agreed with the police request.

This warrant made clear that the Security Service of Ukraine (SBU) and other law enforcement agencies had the capability to eavesdrop on communications networks without the telecom operator's knowledge. Thus, the security services could have used their surveillance systems against protesters. On February 3 the communications regulatory agency of Ukraine reported that it could not determine who had sent the text messages to protesters in January. Secrecy

prevailed.

After March 1, the day Russia annexed Crimea, many Western experts told us at different cyber security gatherings that they expected a massive denial-of-service attack to be launched against Ukrainian websites. The fears were well founded: every Russian conflict with a neighboring country in the 2000s—including Georgia and Estonia—had been accompanied by such relatively crude onslaughts against the countries' online resources.[4] For a while the Ukraine conflict developed along the same lines. On March 3 the Ukrainian information agency UNIAN reported a powerful denial-of-service attack, causing the agency's website to be temporarily taken offline.[5] The Internet infrastructure of the country seemed weak, almost begging cyber hackers to try their hand. Ukrainians clearly understood this vulnerability. That same day Konstantin Korsun, an SBU cyber-security officer in 1996–2006 and now in the cyber security business, working as the head of the NGO Ukrainian Information Security Group and supporting Maidan, appealed for help. "Because of the military intervention of Russia against Ukraine I ask everybody who has the technical ability to counter the enemy in the information war, to contact me and be prepared for a fight," he wrote on LinkedIn. "Will talk to the security forces to work together against the external enemy."

Almost immediately he received a reply from Maxim Litvinov, head of the cyber crime department in the Interior Ministry of Ukraine: "You can count on me." Litvinov said he had analysts, a laboratory, and loyal personnel, and he didn't want to wait until the country was already under attack.[6]

But the large and much-feared cyber attack on Ukraine did not come as it had been anticipated; instead it came from another direction, a tidal wave of propaganda spread on social networks.[7] The Kremlin launched a massive campaign to infiltrate social networks—first of all, VKontakte—and exploit the digital pathways for its own purposes. Russia possessed certain natural advantages on this information battleground. First, both Russia and Ukraine shared a common cultural and historical legacy in the Soviet Union, such as the

experience of World War II and the shared Russian language, used widely in Ukraine. Second, the Russian-based social network VKontakte is the most popular social network in Ukraine, with more than 20 million users. Russian officials knew how to frame the messages they wanted to send and had all but taken control of VKontakte. They then decided to take their information combat to the enemy, fighting on Twitter, YouTube, and anywhere the digital revolutionaries had previously raised a victory flag.

From the Kremlin an army was unleashed, a fighting force whose weapons were words. Legions of trolls, people who disrupt online discussions by deliberately posting inflammatory, extraneous, or off-topic messages, were deployed to provoke and intimidate people. The trolls are not usually volunteers but paid propagandists. In the 2000s they were used inside Russia against liberal and independent media and bloggers. Now this army, hundreds of people, was directed outside.

The trolls often appear in the comments section of traditional news media and social media. Katarina Aistova, a former hotel receptionist, then twenty-one years old, was one of them. In April 2014 she spotted something negative written about Putin on WorldNetDaily. "You are against Putin!" she exclaimed in response to another user. "Do you actually know what he does for his country and for people?? The fact is that Obama is losing ground as a leader." A lot of the commentary was much more strident.

The *Guardian* was among the first in the Western media to find itself in the Russian trolls' crosshairs. On May 4 the newspaper reported that a particularly nasty strain emerged in the midst of the conflict in Ukraine, "which infests comment threads on the *Guardian* and elsewhere, despite the best efforts of moderators." Readers and reporters became concerned that these comments came from "those paid to troll, and to denigrate in abusive terms anyone criticising Russia or President Vladimir Putin." The first complaint to the moderators of the *Guardian* was reported on March 6, when a reader complained, "In the past weeks [I] have become incredibly frustrated and disillusioned by your inability to effectively police the waves of Nashibot trolls who've been relentlessly posting pro-Putin propaganda in the comments on Ukraine v Russia coverage." The

Guardian replied that there was no conclusive evidence about who was behind the trolling, although *Guardian* moderators, who deal with forty thousand comments a day, believed there was an orchestrated campaign.[8]

In 2014 French and then Italian journalists told the authors that they were attacked by trolls when they published critical stories on Russia. In both countries the onslaughts were carried out in fluent and faultless French and Italian, and the trolls attacking the critical reporting from Russia were the same ones who separately were known to write xenophobic and anti-immigrant posts, which led French journalists to suspect that the comments could be coming from a community of far-right-wing activists.

In May, Ilya Klishin, the editor of the TV Dozhd website, shed some light on the trolls focused on the Western media. On May 21 Klishin exposed in *Vedomosti* the organization of trolls that had been directed to target the American audience.[9] He reported that the team serving under Vyacheslav Volodin, the deputy chief of the presidential administration in Moscow, who had replaced Surkov at the peak of the 2012 protests, had proposed a "systematic manipulation of public opinion through social media."

Sources close to the presidential administration told Klishin that preliminary work began in the fall of 2013 and that Volodin personally approved the strategy. Volodin also moved Konstantin Kostin—the Kremlin official who once had been on the other end of a phone line, pressuring the Yandex News team to shape their news report to fit Kremlin wishes—into a key position at the Civil Society Development Foundation, a pro-Kremlin organization, although Kostin remained directly subordinate to Volodin.[10] In the summer of 2013 he announced the launch of a new, large system for social network monitoring called "Mediaimpuls."

It was an ambitious attempt to monitor and manipulate social networks. Kostin boasted that they joined efforts with the Boston-based firm Crimson Hexagon, using a system designed to figure out consumer trends on social networks. According to Kostin, Mediaimpuls could monitor LiveJournal and Twitter along with Russian social networks. But it was cursed with the same trouble the Russian secret services had been lamenting since 2011: it could not deal with Facebook because Facebook does not give up the data.[11]

In the fall of 2013 the newspaper *Novaya Gazeta* exposed a "farm" of trolls writing away in a suburb of St. Petersburg known as Olgino. There the employees were paid over 25,000 rubles a month, then equivalent to about $900, to post comments on blogs and news articles. The troll farm occupied two rooms in a posh home with large glass walls. According to the report, employees in one room wrote blog posts for social networks, while those in the other room worked on comments. The troll farm had close ties with pro-Kremlin youth movements. Among those working in the glass-walled house was Katarina Aistova, the young woman mentioned above.

Anonymous International publicized the internal reports of this group in May 2014, with documents consisting of dozens of analytical briefs detailing the way the comments were dealt with on US media sites. There were also recommendations, such as this one for the site Politico: "In the future, there should be more provocative comments to start the discussion with the audience."

The documents show that the masterminds of the troll movement were curious about legitimate online movements—the documents included, for example, a detailed analysis of Barack Obama support communities on Facebook and Twitter. They were also aware of the perils of being deleted by moderators; one brief cautions about "Censorship on the American Internet." But the most interesting document was one that all but acknowledged that users in the United States could easily spot the troll campaigns supporting Russia, rendering the postings useless. "In the study of major US media, some pro-Russian comments were seen. After a detailed study, it became clear that such comments are extremely negatively perceived by the audience. In addition, users suggest that these comments were written either for ideological reasons or were paid."

Although the campaign may not have worked well in the United States and Britain, Ukraine was different. False reports from the east of Ukraine and fake photographs of purported atrocities and victims flooded VKontakte and Facebook. Photographs of casualties from the war in Syria were doctored and presented as coming from the Ukraine provinces of Luhansk or Donetsk. The trolls claimed the violence was caused by Ukrainian "fascists" and sometimes borrowed images from war movies to make their point. There was a heart-wrenching photograph of

a grieving young girl, sitting by the body of a dead woman sprawled on the ground and carrying the caption, "This is democracy, baby, Ukrainian army is killing Donbass people." It went viral on social networks under the hashtag #SaveDonbassPeople. In fact, however, the photo was borrowed from a famous Russian film, *Brest Fortress*, released in 2010, about the Nazi invasion of the Soviet Union in 1941.

Although this and many other postings in the troll campaigns were filled with deceptions, they also struck a nerve, appealing to the historical memory of the Soviet Union—a country that lost over 30 million people in World War II—and carrying a highly emotional message to the Internet audience: fascists were coming again, this time with backing from the West, and there could be no questions asked, no place for skepticism, doubt, or opposition in this fight to the death.

By the end of 2014 the army of trolls enjoyed a major boost. The trolls at Olgino left the glass-walled house and moved to a four-story building in the same suburb of St. Petersburg in order to accommodate their growing numbers, now 250 people.[12] They worked in twelve-hour shifts and were required to post 135 comments a day.[13] New initiatives were launched, such as a quasi-news agency, like ANNA News, which was registered in Abkhazia, a breakaway region of Georgia. The agency set up accounts on a Russian replica of YouTube, known as Rutube; on YouTube itself; and on VKontakte, Facebook, Twitter, Google+, and Odnoklassniki. They posted videos that were presented as news but were largely propagandistic, including videos celebrating fighting by separatists in Ukraine. Another faux news agency, Novorossia television, set up accounts in social networks, posted videos on a daily basis, and collected money for separatists. The videos were then picked up by conventional pro-Kremlin TV channels and disseminated domestically and internationally. The efforts of these fake news agencies were combined with those of dozens of online communities positioned as blogs of patriotic citizens.

Some of the individual trolls enjoyed large, committed audiences. One of them writes under the name Lev Mishkin, taking his name from a character in Fyodor Dostoyevsky's famous novel *The Idiot*. The character in the novel is a

symbol of Russian humility and kindness, but the troll Lev Mishkin is different. No one knows his true identity, but he is very active online as a Russian propagandist. On Facebook he lists among his friends some prominent pro-Kremlin spin doctors and often mocks Ukraine's political leaders. His message is bitterly anti-American and anti-Western, and he frequently publishes doctored photographs to make his point. As of this writing, he had almost five thousand followers on Facebook and over twenty-six hundred on Twitter, and more than a million people have watched his videos on YouTube. For all his activity, however, Mishkin's biggest coup appeared to be something that almost escaped notice.

On February 4 the audio recording of an intercepted phone conversation between Victoria Nuland, the US assistant secretary of state for Europe, and Geoffrey Pyatt, the US ambassador to Ukraine, was posted on YouTube and the next day reposted by Mishkin, opening a new front on the digital battlefield.

The recording was explosive, a conversation between two US diplomats, discussing how to resolve the ongoing standoff between the Ukrainian government and protesters. In the private conversation, recorded in January 2014, Nuland cursed the European Union, expressing frustration at the EU's handling of the Kiev crisis. According to our sources, Pyatt in Kiev used an ordinary cell phone for this conversation, not an encrypted one. Although the recording was embarrassing to the United States, as Nuland declared "Fuck the EU," another aspect of it proved incendiary. Nuland expressed a preference for who should enter the new Ukrainian government—proof positive, in the Kremlin's view, that the United States was calling the shots in Ukraine. It isn't known precisely who obtained the conversation, but it was someone who wanted to embarrass the United States and had the means to intercept and record a telephone call.

The audio was initially uploaded on the YouTube channel "Re Post," which had been mostly uploading anti-Maidan videos and smearing Ukrainian politicians. In some videos the voice of the cameraman is heard, he speaks in Russian and pretends to be a journalist, but he is very focused on documenting

protesters' faces, weapons (self-made batons and the like), and actions. Most of the videos got only a few hundred views on YouTube.

Quite suddenly, on February 4, the channel's moderators uploaded the conversation, along with another conversation between European officials.[14] Two days passed, and no one noticed. Finally, on February 6, Christopher Miller, then the editor of English-language Ukrainian daily *Kyiv Post*, received an e-mail with a link to the Nuland video. The person who sent it to him, an acquaintance in the security service, asked, "Did you see this?"

Miller was thrown at first. The video had been viewed only three times before Miller watched it, and he wondered whether it was authentic. But the more he listened to it, the more he came to realize it was genuine. He called the embassy to get a comment and asked if it was real. They had no idea what he was talking about and were shocked.[15] Miller at once published the story, on February 6, quoting the intercept on the website of the *Kyiv Post*.[16]

But a strange thing happened on the way to a public uproar over the Nuland comments: Miller was not the only recipient. In fact, before he published his article, the hot intercept had fallen into the hands of the mysterious troll Lev Mishkin, who posted it on his YouTube channel a day before Miller, on February 5. And when Mishkin uploaded it, the video went viral.

The story of the recording—a murky one of phone calls recorded and mysterious uploads—highlights a larger picture depicting the security services, both in Russia and Ukraine, attempting to influence the political course of events with underhanded means. The eavesdropping on Nuland and Pyatt was probably made possible by SORM technology in Ukraine identical to Russia's. The recording was then passed from one hand to another until it became public, in the process removing any fingerprints of who originally made the interception and recording. That's the way combat in the shadows of the digital world is done.

The call created a sensation, but the Ukrainian security service, the SBU, denied any involvement. In two days the SBU held a press conference in Kiev. When asked about the Nuland recording, Maxim Lenko, a senior investigations official in the SBU, who was present at the conference, stepped forward and said, "The Ukrainian Security Service is not conducting any investigation into the matter

at this time."[17]

The video was extensively used by Russian propaganda outlets to portray Maidan as an American conspiracy. The circumstances of the intercept and its circuitous route to the media suggest that it was the SBU, not the Russian secret services, that conducted the interception. It is impossible to know for sure, but we think some SBU officers likely intercepted the Nuland call and then shopped around until they found a colleague or friend who would post it on YouTube. When the scheme didn't ignite a media storm, they kept shopping for an alternative outlet and eventually found one.

Time and again intercepted conversations in Ukraine were used to compromise political opponents, and surveillance on telecommunications was used as a means of intimidation. This strategy provoked a great deal of speculation about conspiracies; for months a Ukrainian mobile operator was accused of sending Ukrainian citizens' personal data to Russia and maintaining their servers in Moscow. No proof was ever found.

The truth, however, might be much simpler, tracing back to SORM, the black boxes first deployed in Russia years earlier to monitor telecommunications and Internet traffic. Ukraine's security services possess their own SORM; except for a period after the Orange Revolution in 2005–2010, they always kept close ties with the Russian security services. The two countries' security officers carried out joint operations and exchanged information, and that special relationship ended, rather spectacularly, only in February of 2014 when the SBU exposed the names of FSB generals who were present in Kiev on the day Yanukovych fled his capital.

Ukraine's version of SORM was even more intrusive than Russia's. "The Ukrainian SORM is tougher—they have the right to interrupt the conversation and we have no such powers," said Victor Shlyapobersky, a chief of the SORM-testing laboratory at the St. Petersburg branch of the Central Research Institute of Communications, one of three main Russian research centers working on SORM development. To be stuck in the Soviet legacy means to be dependent on Russian supplies of surveillance. When Ukraine updated its national needs for SORM equipment in 2010, the Russian company IskraUraltel, a manufacturer of SORM equipment, was happy to announce that it had successfully tested its SORM

devices under the new requirements, and it had been approved by the SBU.[18]

Although Ukraine hewed to Russia's eavesdropping system with equipment supplied by Russia, this does not necessarily mean that Russian secret services conducted all sensitive interceptions, but this option cannot be ruled out. But it does suggest that the Ukrainian security services modeled their surveillance capabilities after the most opaque and nontransparent example, with origins tracing back to the KGB.

Ukraine possessed not only the same equipment as Russia but also used the same terminology. In two decades of independence Ukraine didn't modify the basic terms used to label its surveillance departments. In the Soviet KGB the unit in charge of surveillance was called the OTU (*Operativno-Technicheskoye Upravlenie*, or the Operative-Technical Department), and eavesdropping and surveillance operations were identified in official documentation as ORM. That Soviet-style euphemism means *Operativno-Rozisknie meropriatiya*, or Operative-Search Measures.

In the 1990s the Russian FSB changed the name of the department to the UOTM (adding the word Measures to its title), but for years Ukraine remained attached to the Soviet acronym OTU. Now this department is called the DOTM (the Department of Operative-Technical Measures), echoing the Russian experience.

In late February in Kiev the chief of DOTM was fired along with Maxim Lenko, who had denied SBU's role in intercepting the US diplomats' conversation just three weeks before.[19] In July the chief of DOTM was changed again.[20] This musical chairs of the DOTM indicated that the new Ukrainian authorities didn't accept that the SBU had had nothing to do with the eavesdropping.

The saga of the Nuland interception and the larger battle for the digital space in Ukraine also reflects the reality throughout the former Soviet Union. Some of the nations that became independent in 1991 simply preserved the methods they inherited from the old regime. "Ukraine, Kazakhstan, Belarus, and Uzbekistan, they all use a system that is much closer to SORM than to the European or American systems," Shlyapobersky told us. In our own investigations we found documents confirming that Belarus, Ukraine, Uzbekistan, Kazakhstan, and

Kyrgyzstan all have their national SORM systems. And in most cases this means their legislation and equipment has also been copied and imported from Russia.[21]

In September 2014, seven months after Maidan, Kiev was back to near normal. Independence Square was cleared; there was no sign of the barricades or burning tires that had once clogged the streets. It was time for the parliamentary elections, and Mustafa Nayyem, who had done so much to launch the Maidan movement with his post on Facebook, was one of the candidates. Andrei had difficulty catching up with his busy schedule, so Nayyem suggested they meet at the city court.

Nayyem had found out that a Ukrainian oligarch was trying to run for parliament despite the fact he had spent most of the 2000s out of the country, and this was against Ukrainian law. So Mustafa went to the court, and on the day we met, the hearings were under way.

The shabby Soviet-style building on Moskovskya Street, where the city court occupies a few floors, posed a striking contrast to the Moscow city court, which is all marble, statues, and expensive furniture. In a tiny room packed with journalists, a bald-headed Mustafa, wearing all black, with his two lawyers, faced three judges.

Mustafa's lawyer was in the middle of a long peroration, full of details. The main judge turned left and whispered something to his colleague.

Mustafa's lawyer exclaimed, "You should listen carefully to what I'm saying!"

"Well, the entire country listens to you now," the judge said apologetically.

And he obviously didn't mean only the lawyer. The digital revolutionaries had found their voice.

Chapter 15. Information Runs Free

Along with the pressure on global platforms such as Facebook, Google+, and Twitter, the Kremlin also wanted to ratchet up the pressure on two very popular Russian platforms—the social network VKontakte, with massive user groups of thousands of people involved in political events, and the search engine Yandex, which carried news headlines on its home page that had become essential daily reading for millions of Russians. Both enjoyed widespread use beyond Russia's borders in the former Soviet Union. When Russian authorities set out in 2014 to win the hearts and minds of Russian-speaking populations at home and abroad and to persuade them to accept the Kremlin's version of the conflict in Ukraine, controlling these two home-grown platforms became crucial.

The year began in confusion for VKontakte. On January 24 Pavel Durov, the primary founder, sold 12 percent of the company—his share—to a friend, Ivan Tavrin, CEO of MegaFon, one of the biggest telecommunications companies in Russia, and offered odd explanations for the sale in a post on his page on VKontakte, saying that "what you own, sooner or later, owns you." Reclusive, Durov communicated almost entirely with the outside world by posting on his page. In the same post, however, he stressed that he would remain CEO of VKontakte. "It's my responsibility to [take] care of and protect this network," he wrote.

VKontakte was modeled after Facebook, and Durov even chose the same fonts and colors, blue and white, for his network, but with a more primitive design. The network itself is a strange mix of contradictions: although a user is required to provide a genuine identity to register with VKontakte, the network has been famous for years as a safe haven for pirates, and many used it as a source of watching movies and listening to music for free.[1] It was Russia's most popular social network in 2012, earning over $15 million in net profit that year.

VKontakte was caught in the middle of a conflict over control of the company between two of its biggest shareholders, both oligarchs: Igor Sechin and

Alisher Usmanov. Sechin was a personal friend of Putin; Usmanov was a pro-Kremlin oligarch who had gathered a vast media empire of formerly liberal news outlets—he started with Gazeta.ru, then acquired *Kommersant*, and later turned to the Internet—and absorbed LiveJournal.com, the most popular blogging platform, as well as Mail.ru, the most popular e-mail service, and was believed to want to acquire some of Yandex too.

When caught in the squeeze between the two oligarchs, Durov was feeling the pressure personally. Some shareholders reportedly launched an internal investigation at the behest of one of the oligarchs into Durov's business expense accounts, for reasons that were unclear.[2] In spring 2014 the pressure took its toll on Durov, who was still only twenty-nine years old. His moves became frantic. On March 11 he posted, "Seven Reasons to Stay in Russia," in which he wrote, "In recent months the topic of emigration from Russia has become fashionable. But I go against the trend, and here are my seven reasons to stay in the country." He listed low taxes, talented people, beautiful girls, and so on.

On April 1, out of the blue, Durov announced he was resigning as CEO of VKontakte. Then, two days later, he disavowed his resignation statement, and four days after that he posted a new message, lamenting bitterly the situation inside the company. He said he had filed a lawsuit to try to get back on the board of directors.

Whereas Durov's previous posts had largely been about the company's internal ownership conflict, the posts that he put up on April 16 carried a more ominous tone; they potentially applied to everybody who used the network. The first was posted at 9:36 p.m.:

> On December 13, 2013, the FSB requested us to hand over the personal data of organizers of the Euromaidan groups. Our response was and is a categorical "No." Russian jurisdiction cannot include our Ukrainian users of VKontakte. Delivery of personal data of Ukrainians to Russian authorities would have been not only illegal, but a treason of all those millions of Ukrainians who trust us. In the process, I sacrificed a lot. I sold my share in the company. Since December 2013, I have had no property, but I have a clear conscience and ideals I'm ready to defend.

He then posted a scan of the FSB letter, exactly in the same manner as he had in December 2011, when he refused to cooperate with them about the protests in Moscow.

The second posting, two hours later, declared, "On March 13, 2014, the Prosecutor's office requested me to close down the anticorruption group of Alexey Navalny. I didn't close this group in December 2011, and certainly, I did not close it now. In recent weeks, I was under pressure from different angles. We managed to gain over a month, but it's time to state—neither myself, nor my team are going to conduct political censorship. . . . Freedom of information is the inalienable right of the post-industrial society."

On April 21 Durov was fired as chief executive. He learned the news from journalists. He claimed he was fired because of his public refusal to cooperate with the authorities. The next day TechCrunch, a website, asked Durov in an e-mail about his future plans. "I'm out of Russia and have no plans to go back," he wrote back. Durov left the country.

With Durov gone, the company was firmly under the control of two loyal oligarchs; the Kremlin had managed to repeat the tactic it had used earlier with traditional media, like Gusinsky's Media-Most in the 2000s. This time it was even easier, as there were neither journalists to demand a personal meeting with Putin nor users who might come to demonstrations on Moscow's streets. At this time the Kremlin believed they fully controlled the VKontakte company and its network—they foresaw no surprises. What the Kremlin miscalculated was that a social network is different from either television or newspapers. Although journalists generate the content in traditional media by working in the editorial office, users, often widely dispersed, create the content on social media, and they don't care who owns the network.

These legions of dispersed users would soon prove VKontakte's strength.

On April 24 Putin fired a shot that had wide reverberations at the second-largest Internet company in Russia. He was in St. Petersburg at a media

forum organized by the All-Russia People's Front, an ultrapatriotic, populist movement Putin had urgently launched in 2011 to corral political support from the provinces and other quarters when his United Russia Party, largely made up of bureaucrats, lost the respect of many voters. The new People's Front, consciously evoking symbols and names of the Soviet era, had a modern political purpose for Putin: to counter the liberal-minded, Westernized intelligentsia of the big cities.

It was a staged event in the round, and in the middle of the discussion a pro-Kremlin blogger, Viktor Levanov, addressed Putin with an unusually long statement about the Internet. Levanov first attacked the United States—"It is an open secret that the United States controls the Internet"—then went after Google specifically. "Why can't they build servers here?" he said, echoing the Kremlin line. "I do not want my personal data and information about politicians that run my country to go to the United States."

Putin weighed in and answered as he had before, referring to Snowden and NSA, saying that the servers should be relocated to Russia. Then Putin asserted that the Internet began "as a special CIA project. And this is the way it is developing."

Next Levanov did something unexpected. He asked a question about the Russian company Yandex, one of the most recognizable brands and popular websites in the country. "It is not quite clear what Yandex is: on the one hand we know it as a search engine; but on the other hand it is a kind of media, because all the time, every day the top five news items Yandex collects from other sources are viewed by millions of people. Meanwhile, Yandex does not have a media license and cannot be held liable under the law as a media outlet because it is a search engine."[3]

This was not a casual allegation. By raising the question of whether Yandex was a media organization, the blogger was aiming a knife at its heart. Forcing Yandex to register as media would make the company subject to Russian media legislation and libel law, under which, if the media gets two warnings from the government, it could be closed down. Until this point Yandex had operated outside this control.

Putin eagerly pursued the theme. He claimed that Yandex, when it was

formed, had been "forced" to accept Americans and Europeans in its company's management. "And they had to agree to this," he said. He also lamented that the company was partially registered abroad. Then Putin bore down on the real culprit he had in mind: "As I have said, this was all created by the Americans and they want to retain their monopoly."[4]

Putin's message was ominous, suggesting that one of the most successful Internet companies in Russia was under American control, which in turn controls the Internet. Putin had already warned with great fervor in his Crimea speech about traitors and "fifth columns," and now his comments seemed to suggest there was something wrong with Yandex having foreigners around.

The next day Yandex NV, the Dutch-registered parent company of Russia's search giant, fell 16 percent on the NASDAQ, and American investors rushed to Moscow to talk to Yandex's management.[5] Yandex responded to Putin by saying that international investors' participation was normal for a tech start-up and that, as a public company with a 70 percent free float, no single shareholder could exert pressure.[6] Yandex reminded Putin that Russia was one of the few countries where domestic Internet brands were stronger than global ones.

In early May a worried Yandex recruited to its board German Gref, CEO of the huge state-owned Sberbank and who is thought to be personally close to Putin.[7]

It soon was evident that Putin had not idly raised questions about Yandex. In May Andrei Lugovoi, the parliamentarian who authored legislation making it possible to block Ej.ru, Grani.ru, Kasparov.ru, and Navalny's blog in March, announced a new initiative to force Yandex to register as a media company.[8] It was an unmistakable threat.

In a week the Russian Investigative Committee, an increasingly powerful law enforcement body, sent representatives to Yandex offices with a search warrant.[9] The pretext for the warrant was a criminal investigation conducted by the committee against Alexey Navalny—the committee alleged Navalny had stolen money he had gathered via the online service Yandex, money intended for his campaign for Moscow mayor the previous autumn. But the raid was a shocking development and went way beyond the reasons cited for the search warrant.

Yandex was one of the most famous Russian companies and inspired pride in Russia. Its profitability came not from oil and gas, the traditional sources of Russian wealth, but through building a business based on technology, and here, in this field, Russian engineers successfully competed with American companies—Yandex had a bigger share of the Russian search market than Google.

Many people felt uneasy about Putin's eagerness to target the pride of the Russian tech business. Russian high-tech companies often had foreigners on their boards—it was a ticket to world markets and foreign investments, and for years it signaled success. Now the Russian president had made foreign board members look suspicious, almost as if they were agents of a foreign state.

The campus of Kaspersky Lab headquarters in Moscow fills three modern semitransparent buildings, surrounded by green lawns and the shimmering surface of a nearby reservoir. The tableau suggests nothing more than an ambition to be like Google or Apple—a big multinational, respected everywhere. Kaspersky Lab is one of Russia's most recognizable brands. On the day Irina went there in May 2014, children frolicked on the grass in front of the company's green and red corporate logo. Andrey Yarnikh, head of government relations, said it was the day employees could bring children to the office.

While Irina was walking around with Andrey Yarnikh, a big black SUV braked suddenly behind them. A man of medium height and graying wavy hair, wearing a bright shirt and jeans, jumped out of the car and approached us. It was Eugene Kaspersky, founder and CEO of Kaspersky Lab.

"Hi," he greeted Yarnikh and shook his hand.

"Hi Genya!" said Yarnikh. And then Kaspersky disappeared even faster than he emerged.[10]

Yarnikh explained that Kaspersky didn't like formality either in conversation or clothes, and in the early years of the company, when the laboratory was a relatively small entity, he used to kiss all female employees and shake hands with every man he met.

But this placid surface concealed anxieties behind the glass walls of the headquarters. Putin's remarks about foreigners at Yandex made its way through Kaspersky Lab like a bolt of lightning. Although based in Moscow, Kaspersky boasts that 400 million people worldwide are protected by its cyber-threat and antivirus products. At one point a foreign investment firm, General Atlantic, owned part of Kaspersky Lab.[11] And in February 2014 Kaspersky had established an international advisory board and recruited several Americans, including Howard Schmidt, former cyber adviser to Presidents Bush and Obama. If having Americans involved in an Internet company was going to be a problem, then Kaspersky, like Yandex, would not be immune to scrutiny.

Kaspersky Lab has offices everywhere, from Australia to Germany, South Africa to the United States. Just like Yandex, Kaspersky Lab is registered abroad, in the United Kingdom.[12] And just as Volozh built Yandex, when Kaspersky built up his company, he didn't exploit government connections and has not been promoted by the state.

Kaspersky was a complex and sometimes obscure figure in the world of the Russian Internet. When the first digital attacks were made on the media, he looked the other way. But then he came to the rescue of *Novaya Gazeta*. At other times he took positions that showed sympathy for the Kremlin approach to the Internet. For example, in February 2011 Kaspersky Lab joined the Safe Internet League, an Orthodox-dominated NGO that promotes Internet censorship under the pretext of protecting children from harmful content.[13] The League advanced weird ideas of creating "white lists" of sites approved in advance by them, and cyber *druzhinas* (from the Russian word that means the feudal prince's armed guardsmen) patrolling the Internet.[14] The League has been working closely with Roskomnadzor.[15]

On the day Irina visited, people at Kaspersky were debating Anatoly Karachinsky's decision to move his software company, Luxoft, out of Russia. It prompted a natural question about whether any large international companies could stay. Irina's sources in the company said that many people at Kaspersky Lab regarded Putin's words about the Internet and CIA—and the offensive on Yandex—as a hidden threat. They wondered what to do.

In the center of Moscow a modern office building was erected in 2007 at a time of massive renovation around the city. The building, which houses Silver-City, a business center, has all the hallmarks of that period: all glass and concrete, with ugly rectangular forms that hark back to the 1970s, defined in outlandish orange stripes. It was at this building on June 10, 2014, that Putin was to meet with the leaders of the Russian Internet for the first time in fifteen years; the last and only previous meeting was in December 1999.

Back then people spoke openly in front of Putin and were not afraid to oppose what they saw as the government's power-grab to control the Internet. They did not fear Putin in those days, and by the end of the meeting Putin had supported those who objected to the government intrusion. At that time the Internet was new, and so was the hodge-podge of entrepreneurs who met with Putin. A decade and a half later the Russian Internet had grown into a $143 billion annual business, employing over 1.3 million professionals, generating 8.5 percent of Russia's gross domestic product and accounting for 2.5 percent of all its trade.[16] In those same years Putin's government had imposed surveillance on the Internet —the SORM black boxes and, ultimately, filtering and censorship.

The security at the meeting was strict, and journalists were admitted only with special identity cards issued just for this event. Before Putin arrived, there was a session about the future of the Internet. It was more like a wake. No one jumped from a chair and shouted about the lack of Internet freedom. In fact, the subject of state control over the Internet was never mentioned; rather, it was evident that Putin, not yet in the room, held the upper hand. This reality weighed heavily on those who were present, including Volozh, the founder of Yandex, who had also been present fifteen years earlier and walked out of that meeting with the pencil. At this very moment Volozh was feeling the Kremlin pressure on the business he had built, and everybody knew it.

They could see a powerful reminder in the chair marked "VKontakte." In the chair was not Durov, the founder; instead, there was Boris Dobrodeyev, then deputy chief executive of VKontakte, whose presence underscored the growing

clout of the Kremlin. Dobrodeyev is a scion of the post-Soviet media establishment; his father, Oleg, is head of the television colossus known as the All-Russia State Television and Radio Broadcasting Company.[17] When Dobrodeyev sat in the chair, it was a sign that other chairs could also suffer the same fate—the founders could be replaced. The blogger Leviev, who had invented Alexey Navalny's big red button, was present at the meeting because his company was broadcasting it. When he saw how Durov's chair had been filled, he immediately thought of the peril that faced Volozh and Yandex. "Yandex's business, all its 'circulatory system,' is in Russia: data centers, offices, the staff. Yes, there are offices abroad, but it is a drop in the sea, insignificant. If Volozh was to say something wrong—it will be very easy to take his business away," he told us later.

Putin was late, as usual, and when he did arrive, he didn't immediately enter the conference room; rather, he was shown a small exhibition of Internet start-ups in the hall. He was escorted by Kirill Varlamov, who had grown up in Ekaterinburg, graduated from the local technical university, and joined Uralmash, the mammoth metallurgical factory, as an engineer. In the early 2000s he founded a small software company and soon moved to Moscow. In 2011 he caught the eye of some people at one of Putin's pet projects, the Agency of Strategic Initiatives. It was launched when Putin was prime minister and was designed to be a high-tech incubator, just like a much-publicized effort by Medvedev known as Skolkovo. Varlamov joined the agency, and it proved to be a wise decision; he was introduced to Putin. In the same year, when Putin formed the All-Russia People's Front, Varlamov joined. He was included on a list of nearly five hundred people who were prominent Putin political supporters, most of them celebrities; he was the only one with an Internet background. After Putin was elected president, Varlamov was made the head of a state-funded venture capital fund, giving him power over the budget available to Internet start-ups. By then Medvedev's Skolkovo was in clear decline. Varlamov maintained a key position at the All-Russia People's Front.

Russia had produced an entire generation of bright entrepreneurs in the first years of the digital revolution, but Putin was not interested in them. He wanted,

most of all, someone loyal. Varlamov's appearance at the June meeting signaled that Putin had triumphed. Varlamov's fund had even organized the meeting, and when Putin appeared, Varlamov sat on his right—there was no doubt that Varlamov was the star of the show. Volozh, who was a genuine Internet legend in Russia, looked uneasy. He was exceedingly cautious and repeated his line that there are very few countries in the world where the local Internet companies dominate, and these companies became prominent not because of protection but because they were left alone.

The sole question about repressive measures on the Internet was raised by Dmitry Grishin of Mail.ru, Russia's leading e-mail service. An engineer by training, Grishin, thirty-five years old, was nervous as he looked at Putin. He began by saying that most Russian software advances had happened because the state left the inventors alone. "And we have this mentality," he said. "We have this mentality that we count on ourselves." He added that any contacts with the authorities can't lead to good things, and "in principle, if you can hide, it is better to hide."

Putin sternly interrupted him. "It's wrong," he said, shaking his head. "First of all, you can't hide from us." The remark said everything about the state of the Internet in Russia: it had grown immensely, had enabled appeals for freedom, and yet there was no place to hide.

Grishin reddened and said excitedly, "We often hear that all Internet users are from another planet. But we do love our country; we want to help to make it comfortable to live and work in. And we understand that the Internet has grown and it is now an integral part of the society. Therefore, in principle, we understand that the regulation, it's necessary. And often the ideas in the regulation, they are very correct. But, unfortunately, sometimes it happens that realization, in general, is frightening. And it would be great to develop some sort of process that allows us not only to listen but also to be listened to. It would be very, very important!"[18]

It was a polite appeal but, in its timidity, reflected the reality of Putin and the Internet. The entrepreneurs and businessmen were not challenging the Kremlin; there were no new proposals that day, no confrontations. And some of those present were worried that a discussion might have been started about a project

called Cheburashka, to create a purely domestic Internet—inaccessible from abroad—named after a popular children's cartoon character. The project was suggested by a Russian senator in April, but, thankfully, it did not come up.

The real beneficiary on June 10 was Putin's political machine, the All-Russia People's Front, and Kirill Varlamov. The genuine Internet market leaders were invited not to talk to Putin but to lend legitimacy to a government-funded pet project. And they did.

Although Yandex had once resisted pressure from the Kremlin, now it gave some ground. On September 12, 2014, Yandex announced that the company agreed to formally register three of its online services—Yandex's cloud service, its social network Moi Krug, and its mail system. They were put on a special list of Roskomnadzor consisting of online services required to keep users' metadata for six months and to provide remote access to this data for the Russian security services. Mail.ru and VKontakte were also included on the list.[19] The scope of SORM had just expanded.

Yandex also attempted to tread carefully in the minefield of the Ukraine war. In March the service started offering different maps of Ukraine for Russian and Ukrainian users. The Russians would see a map showing Crimea as part of Russia, while a user in Ukraine would see the peninsula as still part of Ukraine. Yandex explained it by saying Crimea would be shown according to the official position of the country in which the map was viewed.[20]

The Kremlin pressure to control the Internet was not always visible. It did not always appear in black-and-white threats. Sometimes the battle was waged in the mists. Those who believed in keeping the Internet out of the hands of the state tried to survive any way they could. Andrei Kolesnikov learned the game firsthand, and he was a very good player. CEO of an NGO that had been set up in

2001 to oversee Internet domain names, Kolesnikov has a long history with the Russian Internet; in 1992 he was one of eight people who signed the agreement that established the domain .ru. He was present at the meeting with Putin in December 1999, and he also attended the meeting with Putin in June 2014, though this time he was not invited to join the panel.

Kolesnikov was the first Russian expert who joined ICANN's governing bodies, and he was acutely aware of the Kremlin's ideas about the Internet and what the Kremlin thought of NGOs as a whole. To avoid interference, he devoted a lot of time to attending public meetings on Internet security and offered repeatedly to be a technical expert to people who were in charge of setting policy on the Internet. His position was fragile. When Andrei visited him in September 2014, Kolesnikov argued with great fervor that repressive laws were, in fact, in "a parallel reality," and they had no impact on the Internet at all. After half an hour of wrangling, he insisted that what the authorities had done to the Internet was entirely immaterial: "Look, did it affect your morning coffee?"[21]

But the next morning brought disturbing news. The business daily *Vedomosti* exposed a Kremlin plan to gather the Russian Security Council, the advisory group to the president on security, in three days to discuss the option of shutting the country off from the global Internet in case of an emergency.

The centralized structure of the Russian Internet has led the authorities to believe that it is entirely possible and that the international traffic can be cut off either by the operators that control cross-border fiber-optic cables or at the Internet exchange points, where the international traffic joins the national Internet.

Even two decades after the collapse of the Soviet Union, Russian telecommunications remain largely centralized. Russia is connected with the outside world by fiber-optic cables, most of them laid by five Russian national operators, with the state-controlled Rostelecom enjoying the largest Internet backbone network in the country. Russia has only a dozen Internet exchange points (compared with more than eighty in the United States).[22] And nearly half of the Russian Internet traffic passes through one of them, MSK-IX. The MSK-IX itself is based on the premises of the phone station M9, which is owned by Rostelecom.

The geography of Russia doesn't help. Although most of the world's Internet

traffic is passed via underwater cables, Russia connects with the West through the terrestrial cross-border fiber-optic cables laid from Moscow to St. Petersburg to Helsinki and Stockholm, and only recently did Rostelecom lay cables in a new direction, from Moscow to Frankfurt, Germany. In the east there are also some lines to China, Japan, and Iran, but overall the connections to the outside world are sparse.

Although it didn't get as much attention, the Security Council also wanted to talk about a second option—to hand over the powers of administering Russian domains from Kolesnikov's center to the government. If approved, it would mean that all Russian domains were under direct government control—or, rather, direct control of most websites in the country.

This time the initiative was not approved, but the message was strong and clear.

In 2014 Putin had one big secret he wanted to keep: Russian troops were in Ukraine. The Russian security services hunted down people around the country who tried to expose Putin's secret, relying on the same technology the secret police had used almost seventy years earlier.

On April 17, 2014, Svetlana Davydova heard something on the street in the city of Vyazma, about 150 miles west of Moscow, and grabbed her phone. She was a mother of six children and pregnant with the seventh. She knew that outside the small town the Russian military intelligence service had a base, and she had just overheard talk at a bus stop that small groups of officers were being sent to Moscow and then Ukraine.

At that moment Russia was backing an undeclared war by Ukrainian separatists. Davydova had no access to secret information about the military unit; she simply overheard what people were saying on their cell phones at the bus stop. She was very interested in events in Ukraine and personally opposed to the Russian military presence there. She told her husband, Anatoly, what she had heard—and what it might mean. Then she wrote down what she knew.

That day, around 2:00 p.m., she called a hotline to the embassy of Ukraine in Moscow on her cell phone. She told the embassy she had information about the deployment of Russian military intelligence officers to Ukraine, and not much more. Nine minutes later the first secretary of the embassy called her back and asked her to provide details. Davydova relayed all she knew—just rumors she had heard on the street.

Davydova didn't know it, but the FSB was monitoring the hotline, and the Russian security service recorded Davydova's voice on the line to the embassy. The FSB immediately went to work to identify who she was. They had no difficulty—Davydova's phone number was easily traced.

Then nothing happened for a while. Davydova was not questioned about the call. The war in Ukraine grew more intense.

Six months later Davydova had given birth to a baby girl. In two months, on January 21, 2015, there was a knock at the door of her apartment, and when Anatoly opened it, a group of special operations soldiers dressed in black burst in. The group was led by a top official of the FSB sent from Moscow. Davydova was detained, taken away, and the officers searched her small apartment, taking her computer, notebooks, and other materials as the family looked on. Davydova was brought directly to Moscow's Lefortovo prison, the main prison the FSB used for high-profile investigations and detentions. Davydova was frightened—and worried, not least of all about the two-month-old baby she had been torn away from.

Six days later she was charged with treason, which can carry a sentence of twelve to twenty years in prison. She was told that her call to the embassy of Ukraine had been intercepted. She was given a state-appointed lawyer who advised her to plead guilty. Overwrought with emotion and scared, at first she complied.

For the FSB it was not enough to have just a guilty plea, however; they needed to prove she had made the call. For this the security service needed a sample of her voice to compare with the recording of the call. But Davydova refused to give the voice sample.

At this point, in early 2015, her case gained widespread attention in Russia,

and human rights activists visited her in Lefortovo, a common practice. When they came to the prison to see her, the FSB illicitly made a video, without telling her or the activists. Then the FSB reached back to technology that had been created and perfected since 1949 in the work at Marfino and Kuchino. From this video recording they compared her voice on the intercepted phone call.[23]

Davydova was not a spy—she was a housewife. But she was caught up in something larger—the secret services were repeating practices of wiretapping and examining voices, all in an effort to keep the lid on a closed society, to lock up information, even if it was just a rumor a housewife had overheard at a bus stop.

After two weeks in prison and a public outcry, Davydova was released, and the charges were later dropped.

In the summer of 2014 Russian and Ukrainian journalists started to find dozens of profiles of Russian soldiers on VKontakte—and many who had been posted to Ukraine had added to their pages photographs from their posting. The Russian military commanders were not aware the soldiers were posting boastful comments and photographs, identifying their units and their geographic positions.

The pictures and comments revealed a lie that Putin had been spouting about the war. Journalists in Russia's northwestern city Pskov, bordering Latvia and Estonia, found online, on VKontakte, profiles of soldiers from a paratrooper base in the region. The soldiers, who had visited their pages for the last time on August 15–16, posted photographs from Ukraine.

Then the soldiers disappeared. There were awful rumors that dozens of Pskov's paratroopers had been killed in an ambush in Ukraine. On August 22 journalists found a new post on the VKontakte page of one of the soldiers, Leonid Kichatkin:

"Life has stopped!!"

Then, a bit later: "Dear friends!!!!!!!!!! Leonid was killed [. . .] funeral[']s Monday at 10am in Vibutah. Who wants to say goodbye to him, please come over.

My phone number 8953254066. A wife[,] Oksana[.]"

Soon the post reporting the tragedy was removed and replaced by a cheerful post depicting a family celebration. When journalists called the number, a male voice on the phone answered that he was Leonid, alive and well.

But journalists attended the funerals and found the two new graves, and one of them bears the inscription: "Leonid Kichatkin, 30.09.1984–19.08.2014."

When two TV Dozhd journalists and a *Novaya Gazeta* reporter went to the Pskov cemetery, they were attacked by unknown men in balaclavas, and a local parliamentary deputy was beaten up because he had exposed the postings in the local newspaper. But it didn't prevent other leaks about Russian soldiers in Ukraine, and VKontakte turned out to be indispensable—for the soldiers posting and for all the others who would be reading. The soldiers chose VKontakte because it was easy to use and was there, always online. On July 23 a Russian soldier conscript from Samara in southern Russia posted photographs of his artillery pieces on VKontakte, with the words, "All night we were shooting at Ukraine." It went viral.

The Russian seizure of Crimea in early 2014 was carried out bloodlessly by unmarked soldiers. It was relatively clean and swift and heralded as a new kind of warfare. But the two graves in Pskov shattered this image of a bloodless new kind of warfare. The reality that soldiers were being killed on the battlefield in Ukraine exposed the cover-up and deception about Russia's role in the violence in the Donbass. The losses, inevitable lies, and cover-ups didn't work in large part because Russian soldiers as well as their relatives and friends kept posting on VKontakte.

After all the Kremlin efforts to control information, the information about Ukraine freed itself. The primary source of sensitive data on the violence in Ukraine was not journalists, nongovernmental organizations, opposition leaders, activists, or even bloggers; it was soldiers. Inexperienced young men, who had been schooled by state-sponsored television propaganda, were electrified by it and went to war, boasting of their exploits.

The network enabled the information to move freely, unhindered, to millions.