What Does Formalizing Team Telecom Mean for Telecommunications Licensees in

the U.S.?

Anna Oriishi

Graduate School of Media and Governance, Keio University

E-mail: anna.a3@keio.jp

Abstract

The U.S. Executive Branch has advised the Federal Communications Commission (FCC) on

telecommunications licenses relating to national security and law enforcement for over twenty

years. In April 2020, a group known as "Team Telecom" was formalized by Executive Order

13913. Since then, there have been concerns about the unseen impact on applicants, including

the revocation of Chinese companies' Section 214 licenses. However, disagreements often

arise among operators, the government, and regulators with little independent assessment of

what Team Telecom intends to achieve by formalizing. Accordingly, this paper compares FCC

license records between 2001 and 2022 to better understand informal and formalized Team

Telecom. We show that formalized Team Telecom has achieved two major changes that were

not previously possible: (a) the revocation of licenses without mitigation agreements and (b)

the reassessment of mitigation agreements at any time that leads to the voluntary surrender of

licenses. Against the backdrop of China's global rise, formalization resolves the issue of

traditional reviews that relied on results at the time of approval. This reveals that formalized

Team Telecom increases the risk of retroactive revocation of existing licenses, including non-

Chinese licensees.

Keywords: International telecommunication; Team Telecom; U.S.-China Relations; Security

1

Executive Summary

With the advent of the 5G era, huge investments from foreign telecommunications companies are expected in the U.S. telecom market. Meanwhile, some of them are beginning to face difficulties entering and continuing operations in the U.S. market for security reasons. Any company that seeks to provide telecommunications services between a foreign country and the U.S. must obtain a Section 214 license from the Federal Communications Commission (FCC). However, the formalization of an interagency group called Team Telecom in 2020, which has long advised the FCC on security aspects of its reviews informally, has led to an unusual situation—revocation of existing Chinese licenses. What exactly the Executive Branch gained by formalizing Team Telecom remains controversial. Thus, this paper aims to provide certainty for future applicants and current licensees under the formalized Team Telecom review by analyzing the differences between informal and formal review processes. Prior studies have identified license reviews at the time of approval as a concern, but few analyses of postapproval review have been found, and there is little evidence based on long-term records available. Accordingly, this study analyzed more than 4,000 Section 214 license applications from January 2001 to April 2022 to understand license applications reviews and post-approval reviews. As a result, this study demonstrates that the Executive Branch sought to achieve greater authority for post-approval reviews against the perception of growing Chinese threats due to their economic rise and cyber activity. We reveal that the formalized Team Telecom could terminate existing licenses more easily by using revocation or voluntary surrender approaches regardless of whether it is a Chinese company or not. It is evident that the formalized Team Telecom has two major differences from the informal team in terms of reviewing existing licensing: (a) revocation of existing licenses without mitigation agreements, and (b) reassessment of mitigation agreements at any time as typical examples of voluntary surrenders. Overall, this study concludes that formalizing Team Telecom increased the risk of retroactive revocation of existing licenses. Based on the results of this study, not only Chinese companies but also other foreign applicants and current licensees should recognize Team Telecom's post-approval review as a new concern. Our objective evaluation enables us to analyze review trends on an ongoing basis and will contribute to increased predictability for new licensees and applicants.

1. Introduction

In recent years, the concept of cybersecurity relating to Information and Communications Technology (ICT) infrastructure has become increasingly important in many countries. In particular, the implementation of the 5G network is causing geopolitical, economic, and security-related conflict among nations, due to the social and economic impact of the network. Led by the United States, some nations have excluded Chinese companies such as Huawei from national telecommunication networks, while attention has been focused on expelling Chinese telecom operators from the U.S. market.

In 2019 the Federal Communications Commission (FCC) denied China Mobile's Section 214 license application to provide telecommunication service between the United States and a foreign point. This decision was made on the recommendation of the Executive Branch, informally known as "Team Telecom." For more than twenty years, Team Telecom has informally assisted the FCC in reviewing national security and law enforcement concerns that may arise from foreign investment in the U.S. telecom sector. On April 4, 2020, President Donald Trump signed Executive Order 13913 to formalize Team Telecom.² At that time, the FCC explained how this modernization rule was implemented to improve the transparency and timeliness of the informal Team Telecom review.³ However, by 2022, the FCC had already revoked the licenses of four Chinese companies (including China Telecom and China Unicom) because of a request from the formalized Team Telecom. When the U.S. market opened to foreign investment in 1998, revocation of an already issued license was thought not to occur.⁴ Accordingly, it appears that the formalized Team Telecom does not appear to have provided transparency and certainty for already affected licensees. This remains a controversial issue. Thus, this paper aims to provide certainty for future applicants and current licensees under the new Team Telecom rules. Consequently, we propose the following research question: what has the Executive Branch gained by formalizing Team Telecom?

Previous studies have not focused on Team Telecom's post-application monitoring. In this paper, we argue that the Executive Branch gained a stronger oversight of post-approval applications by formalizing Team Telecom against the perception of the growing threat from China.

Although there are several studies on Team Telecom review, there has been little record-based evidence provided. Therefore, the analysis in this study was conducted using more than twenty years of data using the FCC's International Bureau Filing System. As a result, it was found that the formalized Team Telecom can terminate existing licenses more easily by using either revocation or voluntary surrender, suggesting that dealing with Chinese companies' licenses was a driving factor in the consideration of formalization. Moreover, our results provide evidence of the increasing risk of retroactive revocation of existing licenses under the formalized Team Telecom's rule.

2. Literature Review

In the following, first, we introduce the literature related to Team Telecom. Next, we focus on similarities with the Committee on Foreign Investment in the United States (CFIUS).

2-1 The Federal Communications Commission and Team Telecom

The FCC, in its 1998 ruling on foreign investment in the U.S. market, expected that the Executive Branch would raise concerns regarding applications only in very rare circumstances in the future.⁵ The Executive Branch was mentioned with Team Telecom from the late 2000s.⁶ The Department of Justice (DOJ), Federal Bureau of Investigation (FBI), Department of Homeland Security (DHS) (established after the September 11th attacks and began to participate in executive branch review), and the Department of Defense (DOD) co-lead Team Telecom. It is believed that the FCC readdressed applications by international companies comprised of at least 10% direct or indirect foreign ownership to Team Telecom for review. After a referral by the FCC, Team Telecom determines whether it needs to negotiate a mitigation agreement with applicants for the condition of approval and can then request that the FCC grants authority on the condition that the applicant complies with the agreement. Such agreements take two forms: Letters of Assurance (LOA) and National Security Agreements (NSA). Traditionally, the review pattern was to discuss matters with a company and then approve an application with conditions. However, in recent years, researchers have suggested the emergence of new trends, particularly the denial of new applications; 8 for example, the Section 214 license for China Mobile and the partial denial of a new application for a submarine cable connecting Hong Kong to the United States.

After Team Telecom's formalization, we are facing the revocation of existing licenses, such as those of Chinese state-owned companies. This is a result of Executive Branch involvement yet to be explored. The new formalized Team Telecom comprises five features: a membership system chaired by the DOJ; a threat assessment by the Director of National Intelligence (DNI); a two-step review; annual report to the President; and authority to review existing licenses. Although prior studies have focused on reviewing applications, few have examined the post-approval context. Furthermore, there appears to have been no quantitative, long-term analysis of Team Telecom's review for more than a decade.

2-2 The Committee on Foreign Investment in the United States

The CFIUS has been differentiated from Team Telecom and distinguished as a separate agency. Both Team Telecom and the CFIUS work closely on acquisition or merger reviews of U.S. companies in the telecommunications sector. ¹⁰ The CFIUS has also attempted to strengthen its authority under the Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA). CFIUS can now also review new greenfield investments, which means that the scope of their review overlaps with Team Telecom. According to the key provisions of FIRRMA, ¹¹ CFIUS reviews consist of increased emphasis on mitigation agreements, which has been a common approach with Team Telecom. Some studies have suggested that the CFIUS reforms were not only implemented to strengthen the system, but also because of issues with China—China's rapid economic growth and increased cybersecurity threats. ¹²

2-3 Hypothesis

After reviewing prior studies, we found that the formalized Team Telecom bears similarities to the CFIUS in the following factors: a Chair, DNI assessments, subject to examination, and reports to the President. The CFIUS focuses on mitigation compliance and monitoring; Team Telecom may be similarly inclined. It is also necessary to explore Team Telecom's post-review process, but existing research has not yet captured this aspect. In light of the background of the CFIUS reforms, we argued that the Executive Branch sought to achieve greater authority for post-approval review against the perception of the growing threat from China.

3. Methods

In this study, we analyzed new licenses approved from 2001 (when China joined the World Trade Organization (WTO)), through April 2022, after which Chinese companies' licenses were revoked. The data included grant applications with mitigation agreements. Additionally, the analysis included the applications or licenses of five Chinese companies that were either denied or revoked by the FCC: China Telecom Americas (ChinaTelecom), China Unicom Americas (ChinaUnicom), Pacific Networks Corp (PacificNetworks), its wholly owned subsidiary ComNet USA (ComNet), and China Mobile International (USA) Inc (ChinaMobile). Table 1 provides summarized information on the Chinese licenses.

Table 1 Analysis of FCC Reviews of Chinese Companies' Licenses

File Number	Applicant Name	Filed Date	Grant Date	Last Action Date	Last Action
ITC-214-20010613-00346	China Telecom (Americas) Corporation	2001/6/13	2001/7/20	2021/10/26	Revoked
ITC-214-20020716-00371	China Telecom (Americas) Corporation	2002/7/16	2002/8/21	2021/10/26	Revoked
ITC-214-20020724-00427	China Unicom (Americas) Operations Limited	2002/7/24	2002/9/27	2022/1/27	Revoked
ITC-214-20020728-00361	China Unicom (Americas) Operations Limited	2002/7/27	2002/9/11	2022/1/27	Revoked
ITC-214-20070907-00368	Pacific Networks Corp.	2007/9/7	2008/9/3	2009/1/2	Surrendered
ITC-T/C-20070725-00285	China Telecom (Americas) Corporation	2007/7/25	2007/8/15	2007/8/16	Granted
ITC-214-20090105-00006	Pacific Networks Corp.	2009/1/5	2009/4/8	2022/3/16	Revoked
ITC-T/C-20080913-00428	ComNet (USA) LLC	2008/9/13	2009/4/24	2009/5/7	Consummated
ITC-214-20090424-00199	ComNet (USA) LLC	2009/4/24	2009/4/24	2022/3/16	Revoked
ITC-214-20110901-00289	China Mobile International (USA) Inc.	2011/9/1	-	2019/5/9	Denied

The analysis was divided into three parts based on trends with the Chinese licensees. As Table 2 indicates, the first period (January 2001 – December 2010) and the second (January 2011 – April 2020) are under informal Team Telecom review. The formalized review started in the third period (April 2020 – April 2022). During each of these periods, we investigate the licenses from the perspective of application review and post-approval review.

Table 2 Three Periods of Analysis (January 2001 – April 2020)

	Type Grant Period		Period Title
1	Informal	January 2001-December 2010	China's Entry into the U.S. Market
2	Informal	January 2020-April 2020	China Mobile's Application and Rejection
3	Formalized	April 2020-April 2022	Revoking Chinese Companies' Licenses

Finally, we compare the first two informal periods with the third formalized period to clarify what is new for Team Telecom review.

3-1 China's Entry into the U.S. Market (January 2001 – December 2010)

As Chinese companies entered the U.S. market after 2001, combined with the establishment of the Executive Branch review process, the response to Chinese companies became stricter.

Reviewing Application: DHS Participation and Leadership

Between 2001 and 2010, we observed that the Executive Branch had mitigation agreements in 34 applications among 3,237 applications granted by the FCC. Table 3 shows how the Executive Branch was involved in Section 214 application reviews.

Table 3 Executive Branch Review of License Applications (January 2001 – December 2010)

Grant Year	Applicant Name	Mitigation Agreements	Executive Branch in Mitigation Agreements	Executive Branch Petitioned	Grant Year	Applicant Name	Mitigation Agreements	Executive Branch in Mitigation Agreements	Executive Branch Petitioned
2001	China Telecom	×	×	×		Intelsat USA	NSA*	DOJ,FBI	-
2001	Reach	NSA*	DOJ,FBI	-	2008	Ekofon	LOA	DOJ,DHS	DOJ,DHS
	China Telecom	×	×	×	2000	Pacific Networks Corp.	LOA	DHS,DOJ	DHS,DOJ
2002	China Unicom	×	×	×		Cablemas	LOA	DHS	DOJ,DHS
	China Unicom	×	×	×		Horizon	NSA*	DOJ,DHS	DOJ,FBI,DHS
	Intelsat USA	LOA	DOJ,DHS,FBI	DOJ,DHS, DOD,FBI,		Pacific Networks Corp.	LOA	DHS,DOJ	DOJ,DHS
2006	BTI America	LOA	DOJ,DHS,FBI	DOJ,DHS,FBI		FastIPCalls	LOA	DOJ,DHS	DOJ,DHS
	Belgacom	LOA	DOJ,DHS,FBI	DOJ,DHS,FBI	2009	ComNet	LOA	DHS,DOJ	DOJ,DHS
	T-Mobile USA	NSA*	DOJ,FBI	-		WX	LOA	DOJ,DHS	DHS,DOJ
	Reach	NSA*	DOJ,FBI	-		Inmarsat Group	NSA*	DOJ,DHS	_
	Del Castillo	LOA	DOJ,DHS,FBI	DHS		ACT	LOA	DHS,DOJ	DOJ,DHS
	Redes Modernas	LOA	DOJ,DHS,FBI	DHS		Stanacard	LOA	DOJ,FBI	DOJ
	Sage VOIP	LOA	DOJ,DHS,FBI	DHS		GTI	LOA	DOJ	DOJ
2007	JuBe	LOA	DOJ,DHS,FBI	DHS		VIZADA	NSA*	-	DOJ,FBI,DHS
2007	Space Net	LOA	DOJ,DHS,FBI	DHS	2010	Comsat	NSA*	-	DOJ,FBI,DHS
	Rebtel Services	LOA	DOJ,DHS,FBI	DHS	2010	Cable & Wireless	LOA	DHS	DHS
	Air Channel	LOA	DOJ,DHS,FBI	DHS		Hibernia Atlantic	LOA	DHS,DOD, DOJ	DOJ,DHS
	Zed Telecom	LOA	DHS,DOJ,FBI	DHS		Alrus	LOA	DOJ,DHS	DOJ,DHS

Note. Shaded areas highlight applications of Chinese companies specifically mentioned in the text.

We infer from Table 3 that the Executive Branch was less focused on the new licensing in the early 2000s. The table also shows just one application (Reach) had a mitigation agreement in 2001. Indeed, the applications from China Telecom and China Unicom filed in 2001 and 2002 were approved without any agreements with the Executive Branch. Similarly, several applications in the early 2000s were approved with no comments by the Executive Branch, even though they had 10% or more direct or indirect foreign ownership.

In response to China's rapid economic development since joining the WTO, some sectors of U.S. society voiced fears that China poses an economic and military "threat." ¹³.

^{*} Diversion of another license's mitigation agreemen

⁻ No record

With the establishment of the DHS's Office of Policy, the Executive Branch became involved in the review of Section 214 licenses from the late 2000s. For example, on the DHS's initiative, Pacific Networks signed an LOA in 2008 and 2009, and ComNet signed an LOA in 2009. This was unlike the applications of China Telecom and China Unicom in the early 2000s, which were similarly controlled by the Chinese government.

The Executive Branch used LOAs and NSAs to encourage applicants to commit to information security matters, including preventing surveillance by foreign governments or entities. For example, the application of Pacific Networks required a three-page LOA to be signed by the company as well as an agreement with six required or conditional notices. At this time, these provisions were still more robust compared to others.

Post-Approval Review: The Process was Not Established

We found no record of Team Telecom monitoring mitigation agreements to date. Rather than monitoring the agreement, the Executive Branch dealt with older licenses that did not have agreements in place in the early 2000s by re-signing agreements, because once an application was approved, the Executive Branch could not renegotiate the agreement unless the applicant filed a new application. For example, Team Telecom placed no objection to China Telecom's applications in 2001 and 2002, and both were approved. At the time of China Telecom's filing of another application in 2007, the DHS renegotiated to enter into an agreement for licenses previously approved in the early 2000s.

It is important to remember that the Executive Branch had left two China Unicom licenses with no agreement until the licenses were revoked in 2022. Additionally, it is also worth mentioning that China Telecom's LOA in 2007 was not renewed until 2021 when the license was revoked. Post-approval reviews and license revocations began in the 2010s, which is discussed in more detail later, as China's economic growth surpassed Japan's and started to approach that of the United States. China experienced rapid economic development and increased the U.S. trade deficit. In 2010, China overtook Japan to become the world's second largest economic power behind the United States in terms of the GDP and consequently, an economic threat to the U.S.¹⁵

3-2 China Mobile's Application and Rejection (January 2011 – April 2020)

In addition to China's economic threats, the Executive Branch became increasingly concerned about cyber threats to national security. ¹⁶ In 2011, China Mobile filed a new application for a Section 214 license, following China Telecom and China Unicom. Around that time, Team Telecom began to monitor licenses with mitigation agreements.

Reviewing the Application: The DOJ Encompasses the FBI Leadership

Between January 2011 and April 2020, we observed that Team Telecom had mitigation agreements with 80 applications among 978 applications granted by the FCC. Table 4 illustrates how the Executive Branch was involved in the application review.

Table 4 Executive Branch Review of License Applications (January 2011 – April 2020)

Grant Year	Applicant Name	Mitigation Agreements	Executive Branch in Mitigation Agreements	Executive Branch Petitioned	Grant Year	Applicant Name	Mitigation Agreements	Executive Branch in Mitigation Agreements	Executive Branch Petitioned
	Rules Telecomm	LOA	DOJ	DOJ		Netuno	LOA	DOJ	DOJ, DOD
2011	Antel USA	LOA	DOJ	DOJ		US Voicecom	LOA	DOJ	DOJ, DHS
2011	Homeland Phone	LOA	DOJ	DOJ		One Allied Fund	LOA	FBI	DOJ, FBI
	IP To Go	NSA*	DOJ	DOJ		Sheng Li	LOA	FBI	DOJ
	Communications Rey	LOA	DOJ	DOJ		AMERICA NET	LOA	FBI	FBI, DOJ
	T-Mobile USA	NSA*	DOJ, FBI, DHS	_		SHUF	LOA	FBI	DOJ
2012	GSH	LOA	DOJ	DOJ, DHS		Routetrader	LOA	FBI	DOJ
2012	Electrosoft Services	LOA	DOJ	DOJ, DHS		ALCALLER	LOA	FBI	DOJ, FBI
	Bright Packet	LOA	DOJ	DOJ, DHS		Nuvetel	LOA	DOJ	DOJ, FBI
	Voiamo US	LOA	DOJ	DOJ	2015	011Now Technologies	LOA	FBI	FBI
	Itsoftel	LOA	DOJ	DOJ		Emsitel	LOA	FBI	FBI
	TI Sparkle North America	LOA	DOJ	DOJ		emveno	LOA	DOJ, FBI	DOJ, FBI
	Glentel Corp.	LOA*	DOJ, FBI, DHS	-		Vista Latina	LOA	FBI	FBI
	Cohere Communications	LOA	DOJ	DOJ		My Fi	LOA	FBI	DOJ, FBI
	Advanced Voice Technologies	LOA	DOJ	DOJ		Five9	LOA	FBI	DOJ
	Ocean Technology	LOA	DOJ	DOJ		Dharm	LOA	DOJ	DOJ, FBI
2013	42COM	LOA	DOJ	DOJ		US Matrix Telecommunications	LOA	DOJ	DOJ
	Telefonica Digita	LOA	DOJ	DOJ		US Telephone & Telegraph	LOA	DOJ	DOJ
	Moontius	LOA	DOJ	DOJ		Reliance	LOA	DOJ	DOJ
	Phonesty	LOA	DOJ	DOJ		Tampnet Inc.	LOA	DOJ	DOJ, FBI
	Synety Group PLC	LOA	DOJ	DOJ	0040	Telecom Services Network	LOA	DOJ, FBI	DOJ
	Angel Americas	LOA	DOJ	DOJ,FB	2016	Telkom USA	NSA	DOJ	DOJ
	TELEDIREK	LOA	DOJ, DHS	DOJ,DHS		iTalk Mobile	NSA	DOJ	DOJ, FBI
	Voice Trader	LOA	DOJ	DOJ		IP Network America	LOA	DOJ	DOJ
	amaysim	LOA	DOJ	DOJ		HIGHCOMM	LOA	DOJ	DOJ, FBI
	TWare Connect	LOA	DOJ	DOJ, FBI, DHS		Moxtel	LOA	DOJ	DOJ, FBI
	Angel Mobile	LOA	DOJ, FBI	DOJ, DHS		Swisstok Telnet	LOA	DOJ	DOJ, FBI
	Quickly Phone USA	LOA	DOJ, FBI	DOJ, DHS	2017	Cyan Security USA	LOA	DOJ	DOJ, FBI
	iTellum	LOA	DOJ	DOJ,DHS		TX Voice Wholesale	LOA	DOJ	DOJ, FBI
	Telediga	LOA	DOJ	DOJ, DOD, DHS		TvF Cloud	LOA	DOJ	DOJ
2014	Altex	LOA	DOJ	DOJ, DOD, DHS		Lexitel	LOA	DOJ	DOJ
2014	Flock FZ-LLC	LOA	DOJ	DOJ, DOD, DHS		NYXCOMM	LOA	DOJ	DOJ
	3GTY	LOA	DOJ, FBI	DOJ		MATCHCOM	LOA	DOJ	DOJ, FBI
	First Technology Development	LOA	DOJ, FBI	DOJ		Zero Technologies	LOA	DOJ	DOJ, FBI
	VoxVision	LOA	DOJ, FBI	DOJ, DHS	2018	Ztar Mobile	LOA	DOJ	DOJ, FBI
	KOL	LOA	DOJ, FBI	DOJ, DHS		VRT USA	LOA	DOJ	DOJ, FBI
	Yatango	LOA	DOJ, FBI	DOJ, DHS		Rebtel Networks	LOA	DOJ	DOJ, FBI
	iTalk24	LOA	DOJ, FBI	DOJ, DHS		eKaleo	LOA	DOJ	DOJ, FBI
	COMMKONEKT	LOA	FBI	DOJ, FBI	2019	Neutral Networks USA	LOA	DOJ	DOJ
	Speed Telco	LOA	DOJ	DOJ, FBI	2020	SORACOM	LOA	DOJ	DOJ

^{*}Diversion of another license's mitigation agreement

- No record

The review was led mainly by the DOJ during this period. Bipartisan congressional leaders began expressing concerns about Huawei and ZTE Corporation to the FCC in late 2010.¹⁷ The mitigation agreements were extended to supply chain measures. Formatted LOAs and NSAs for Section 214 licenses were used, rather than reused from other licenses.

Post-Approval Review: Revoked or Surrendered

Team Telecom progressively established a process to ensure compliance with mitigation agreements. From as early as 2012, based on information in FCC records, we observed that Team Telecom started to confirm the existing licenses. Table 5 shows how the license status changed during this period. We can see two statuses were recorded: surrendered and revoked.

Table 5 Status Change of Existing Licenses (January 2011 – April 2020)

	Applicant Name	Grant Year	Mitigation Agreements	Last Action Year	Last Action		Applicant Name	Grant Year	Mitigation Agreements	Last Action Year	LastAction
1	Intelsat USA	2006	NSA*	2016	Surrendered	16	Alrus	2010	LOA	2018	Surrendered
2	Belgacom	2006	LOA	2018	Surrendered	17	IP To Go	2011	LOA	2016	Revoked
3	Redes Modernas	2007	LOA	2016	Revoked	18	GSH	2012	LOA	2014	Surrendered
4	Sage VOIP	2007	LOA	2014	Revoked	19	Ocean Technology	2013	LOA	2016	Revoked
5	JuBe	2007	LOA	2016	Revoked	20	42COM	2013	LOA	2019	Surrendered
6	Space Net	2007	LOA	2018	Revoked	21	Telefonica Digita	2013	LOA	2018	Surrendered
7	Air Channel	2007	LOA	2018	Revoked	22	Angel Americas	2013	LOA	2019	Revoked
8	Zed Telecom	2007	LOA	2018	Surrendered	23	TELEDIREK	2014	LOA	2018	Surrendered
9	Intelsat USA	2008	NSA*	2019	Surrendered	24	amaysim	2014	LOA	2015	Surrendered
10	Cablemas	2008	LOA	2019	Revoked	25	Angel Mobile	2014	LOA	2019	Revoked
11	Horizon	2009	NSA	2016	Surrendered	26	Altex	2014	LOA	2017	Surrendered
12	FastIPCalls	2009	LOA	2019	Surrendered	27	Speed Telco	2014	LOA	2016	Surrendered
13	WX	2009	LOA	2018	Revoked	28	Routetrader	2015	LOA	2018	Surrendered
14	ACT	2009	LOA	2014	Revoked	29	Swisstok Telnet	2017	LOA	2018	Surrendered
15	Hibernia Atlantic	2010	LOA	2015	Surrendered	30	TvF Cloud	2017	LOA	2018	Surrendered

Note. Shaded area indicates the license revoked.

Because of non-compliance with the existing mitigation agreement, Team Telecom requested that the FCC revoke 15 existing authorizations. This took place from 2014 onward, when the FCC revoked 12 of the 15 licenses while the rest were returned with a "surrender" status by the applicants.

The DOJ established a dedicated compliance and enforcement team, which was separated from the review teams in early 2018. The team monitors the mitigation agreements with the CFIUS and Team Telecom to ensure they are complied with and, when necessary, enforced.¹⁸

In September 2018, Team Telecom recommended to the FCC a denial of China Mobile's application filed in 2011, which took seven years to review. In response to this action, the FCC formally rejected the application in 2019. As a reason for denying the application, the FCC cited the U.S. government's increased concern in recent years about the Chinese government's malicious cyber activities such as computer intrusions and economic espionage. The FCC also implied that existing licenses, such as China Telecom and China Unicom, should be revoked.¹⁹

^{*}Diversion of another license's mitigation agreement

3-3 Revoking Chinese Companies' Licenses (April 2020 to April 2022)

On April 4, 2020, President Trump signed Executive Order 13913 to formalize both Team Telecom and its process. The new Team Telecom is comprised of commission members and advisors. The Executive Order appointed the DOJ as the chair of the committee, with exclusive authority to communicate with applicants or licensees on behalf of Team Telecom, initiating the review, making the final decision in the event of a tied vote, and monitoring compliance with all mitigation measures.

Reviewing Applications: DOJ as Chair of New Team Telecom

Between April 2020 and April 2022, we observed that the Executive Branch had established mitigation agreements in 17 applications among 76 applications granted by the FCC. Table 6 shows how the Executive Branch is involved in the application review.

Table 6 Executive Branch Review of License Applications (April 2020 – April 2022)

Grant Year	Applicant Name	Dilicant Name Mitigation Agreements		Executive Branch Petitioned
	AFRIX Telecom	LOA	DOJ	DOJ
	Pivotel America	LOA	DOJ	DOJ
	Reach Mobile	LOA	DOJ	DOJ
	FIDELITEL	LOA	DOJ	DOJ
2020	Itel Networks	LOA	DOJ	NTIA
	Tadiran Telecom	LOA	DOJ	NTIA
	Liberty	LOA	DOJ	NTIA
	ARIA TEL	LOA	DOJ	NTIA
	Telecom2Go	LOA	DOJ	NTIA
	Plintron	LOA	DOJ	NTIA
	Wuru Telecom	LOA	DOJ	NTIA
2021	Marcatel	LOA	DOJ	NTIA
	InfiCloud	LOA	DOJ	NTIA
	Interoute	LOA	DOJ,DHS	NTIA
	Oktacom	LOA	DOJ	NTIA
2022	Rakuten	LOA	DOJ	NTIA
	Vocus Group	LOA	DOJ	NTIA

Note. Shaded areas highlight applications specifically mentioned in the text.

In modernization rule, the National Telecommunications and Information Administration (NTIA) began submitting petitions on behalf of the Executive Branch to report the results. It is evident from Table 6 that the NTIA became a notifier in mid-2020, indicating that the review process began under a new structure. In the 2000s, LOAs were only a few pages. As a result of the increase in provisions, LOAs in the 2020s are typically 10 pages or more.

Post-Approval Reviews: Revoked or Voluntarily Surrendered Licenses

Executive Order 13913 granted Team Telecom significant authority to review existing authorizations by a majority vote from the committee members. Due to the FCC Order in 2020, Team Telecom was granted permission to review "at any time" an existing license that the FCC had previously just referred to the Executive Branch,²⁰ in other words, including those that have not resulted in mitigation agreements. Table 7 shows how the license status changed after formalizing.

Table 7 Status Change of Existing Licenses (April 2020 – April 2022)

	Applicant Name	Grant Year	Mitigation Agreements	Last Action Year	Last Action		Applicant Name	Grant Year	Mitigation Agreements	Last Action Year	LastAction
1	China Telecom	2001	LOA (2007 Signed)	2021	Revoked	25	US Voicecom	2015	LOA	2020	Voluntary Surrender
2	China Telecom	2002	LOA (2007 Signed)	2021	Revoked	26	AMERICA NET	2015	LOA	2022	Voluntary Surrender
3	China Unicom	2002	×	2022	Revoked	27	SHUF	2015	LOA	2022	Voluntary Surrender
4	China Unicom	2002	×	2022	Revoked	28	011Now Technologies	2015	LOA	2020	Voluntary Surrender
5	Rebtel Services	2007	LOA	2020	Surrendered	29	Emsitel	2015	LOA	2021	Voluntary Surrender
6	Ekofon	2008	LOA	2020	Surrendered	30	emveno	2015	LOA	2020	Voluntary Surrender
7	ComNet	2009	LOA	2022	Revoked	31	Vista Latina	2015	LOA	2020	Voluntary Surrender
8	Pacific Networks	2009	LOA	2022	Revoked	32	MyFi	2015	LOA	2020	Surrendered
9	Rules Telecomm	2011	LOA	2020	Voluntary Surrender	33	Dharm	2015	LOA	2020	Voluntary Surrender
10	Homeland Phone	2011	LOA	2020	Voluntary Surrender	34	US Telephone & Telegraph	2015	LOA	2020	Voluntary Surrender
11	Voiamo US	2012	LOA	2020	Voluntary Surrender	35	Telecom Services Network	2016	LOA	2021	Voluntary Surrender
12	Itsoftel	2013	LOA	2020	Voluntary Surrender	36	iTalk Mobile	2016	NSA	2021	Surrendered
13	Moontius	2013	LOA	2020	Voluntary Surrender	37	IP Network America	2016	LOA	2021	Voluntary Surrender
14	Voice Trader	2014	LOA	2021	Voluntary Surrender	38	Moxtel	2017	LOA	2020	Voluntary Surrender
15	TWare Connect	2014	LOA	2020	Surrendered	39	Cyan Security USA	2017	LOA	2020	Surrendered
16	iTellum	2014	LOA	2020	Voluntary Surrender	40	TX Voice Wholesale	2017	LOA	2020	Surrendered
17	Telediga	2014	LOA	2020	Voluntary Surrender	41	Lexitel	2017	LOA	2020	Voluntary Surrender
18	Flock FZ-LLC	2014	LOA	2021	Surrendered	42	NYXCOMM	2018	LOA	2022	Surrendered
19	3GTY	2014	LOA	2021	Voluntary Surrender	43	MATCHCOM	2018	LOA	2020	Voluntary Surrender
20	VoxVision	2014	LOA	2020	Voluntary Surrender	44	Zero Technologies	2018	LOA	2020	Voluntary Surrender
21	KOL	2014	LOA	2020	Voluntary Surrender	45	Ztar Mobile, Inc.	2018	LOA	2022	Voluntary Surrender
22	Yatango	2014	LOA	2020	Voluntary Surrender	46	VRT USA	2018	LOA	2022	Surrendered
23	COMMKONEKT	2014	LOA	2022	Voluntary Surrender	47	eKaleo	2019	LOA	2020	Voluntary Surrender
24	Netuno	2015	LOA	2020	Voluntary Surrender	48	Wuru Telecom	2021	LOA	2022	Surrendered

Note. Shaded area indicates a license that was revoked or voluntarily surrendered.

Revoking Chinese State-owned Companies' Licenses

Ten days after the release of the Executive Order, the NTIA recommended to the FCC that China Telecom's license should be revoked on April 14, 2020. Based on this, the FCC began the process of revoking the licenses of China Telecom, as well as China Unicom, Pacific Networks, and ComNet. Finally, the FCC revoked all four China-owned telecom companies by 2022. The FCC first revoked China Telecom's license for non-compliance of the mitigation agreement as one reason in 2021. The Executive Branch insisted that the national security

environment had changed significantly since 2007, when the FCC last certified China Telecom's Section 214 authorization. They highlighted that the 2019 Director of National Intelligence's (ODNI) worldwide threat assessment identified China as the most active strategic competitor responsible for cyber espionage. In that report, cyber issues were listed at the top.²¹

Then, linked to that decision, the FCC revoked the licenses of China Unicom, which had not entered into a mitigation agreement, for significant national security and law enforcement risks, similarly to China Telecom. Before formalizing Team Telecom, there had been revocation of licenses for mitigation agreement violations. Given such precedents, it was of note that China Unicom's licenses approved in the early 2000s—even though they had not signed any agreement with the Executive Branch—were to be revoked in 2022. Such a license revocation—without an agreement given national security—was never seen on record before.

Voluntary Surrender

Table 7 shows a series of "voluntary surrender" of licenses with mitigation agreements. Even though international Section 214 authorizations have no set term or expiration date, 31 voluntary surrenders had been confirmed in just two years, including companies from countries other than China.

The letters to notify the FCC of voluntary surrenders were formalized. All letters stated that the licensees had already informed the DOJ that they had waived their rights. The DOJ was authorized to monitor compliance with any mitigation measures, which Team Telecom recommended that the FCC impose as a condition of licensure. ²² According to budget documents, in 2020 the DOJ promoted the initiative to reassess all lower-risk CFIUS and Team Telecom mitigation agreements and terminate those that were no longer necessary. ²³ Considering these facts, it is most likely that the emergence of the new licensing status, voluntary surrender, can be identified as a part of this DOJ initiative. In short, we have observed that the Executive Branch now has wide discretionary powers to review existing licenses and that non-national operators other than Chinese companies are also affected by the new rule.

4. Results

We analyzed FCC data on Section 214 licensing applications from January 2001 to April 2022. This study demonstrated that the formalized Team Telecom could terminate the existing licenses more easily by using revocation or voluntary surrender approaches. By 2010, nine years after joining the WTO, China had become the second largest economy behind the first-place United States. Subsequently, the new threats of increased economic strength and cyber activity may have increased the U.S. government's perception of the threat from China. Under these circumstances, post-approval review was tightened over the years. The DOJ led the review from the 2010s and is now the chair of Team Telecom with strong authority. Table 8 summarizes the analysis.

Table 8 Executive Branch Involvement Before and After Formalization

	Туре	Infor	mal	Formalized		
	Grant Year	January 2001 - December 2010	January 2011 - April 2020	April 2020 - April 2022		
	Lead Agency	DHS from 2006 DOJ, FBI		DOJ as Chair of Team Telecom		
Miti	gation Agreement	34 Licenses	80 Licenses	17 Licenses		
Surrendered	With Mitigation Agreement	2 Licenses	19 Licenses	11 Licenses		
Revoked	With Mitigation Agreement	0	12 Licenses	4 Licenses		
Revoked	Without Mitigation Agreement	0	0	2 Licenses		
Voluntary Surrender	With Mitigation Agreement	0	0	31 Licenses		
,	Expired endered +Revoked oluntary Surrender)	2 Licenses	31 Licenses	48 Licenses		

Note. Shaded area indicates two major differences between informal and formalized Team Telecom in terms of post-approval review.

In Table 8, it is evident that the formalized Team Telecom has two major differences from the informal team in terms of reviewing existing licensing: (a) revocation of two existing licenses without mitigation agreements, and (b) reassessment of mitigation agreements without a new application at any time as typical examples of voluntary surrenders. We concluded that these two critical changes would increase the risk of retroactive revocation of license holders, including operators other than Chinese in the future.

4-1 Revoked Licenses without Mitigation Agreements

After the April 4, 2020 Executive Order, Team Telecom immediately led the review of the existing licenses of the four Chinese companies, regardless of any preexisting mitigation. As a result, the FCC revoked all of them. Previously, the unformalized Team Telecom only requested that the FCC revoke existing authorizations because of non-compliance with the agreement. However, the new Team Telecom also recommended that the FCC revoke the two licenses of China Unicom without mitigation agreements. This is because of a new rule; as long as the FCC sent the application to Team Telecom at application review, the existing licenses could be revoked, even if Team Telecom did not raise any concerns at the time of approval. Indeed, in the early 2000s, prior to when the DHS began leading the review process, agreements were not signed for most applications as with China Unicom. Now that the Executive Branch is reviewing existing licenses, potentially there are many licenses that could still be reviewed and revoked.

4-2 Reassessment of Mitigation Agreements at Anytime

Voluntarily surrendered licenses ("voluntary surrender") indicated that Team Telecom can review and close the existing license at any time, without any new application as before. We observed 31 voluntary surrenders of licenses with mitigation agreements after Team Telecom was formalized. From 2001 to 2022, 48 of the 81 expired licenses were terminated as a voluntary surrender or surrender during the previous two years. While the Executive Branch used to renegotiate agreements, such occasions typically arose only when the applicant sought a new FCC authorization. For example, as mentioned earlier, the DHS renegotiated the agreement with China Telecom in 2007 for the licenses approved in the 2000s. As well as the rule change, the DOJ established the team to ensure mitigation agreements were complied with and, when necessary, enforced as the chair of Team Telecom. Therefore, the situation is legally and systematically viable for focusing on terminating licensees, regardless of the review at the time of authorization, even twenty years ago. As a result, the existing licenses of foreign companies other than Chinese could also be affected.

5. Discussion

We may reasonably conclude our argument was supported. Our results suggest that the Executive Branch sought to achieve greater authority for post-approval review against perception of the growing threat from China. In addition to China's economic rise, Chinese cyber activities are believed to have increased the U.S. government's perception of China as a threat. The analysis implies that the executive branch—when faced with limitations in dealing with Chinese licenses in abatement agreement—recognized the need for and cost of post-approval review while also strengthening its structure and systems.

5-1 China Mobile's Application and China Unicom's Licenses

One explanation is that China Mobile's 2011 application was a powerful reminder to change the Team Telecom review. According to *Los Angeles Times*, Team Telecom's review of China Mobile's application was complicated by the fact that two other Chinese government-owned firms, China Telecom and China Unicom, which were already granted licenses in early 2000.²⁴ If the Executive Branch tries to deny China Mobile's application, they will also have to revoke the existing China Unicom license, to avoid being criticized as discriminatory. However, as pointed out earlier, there was no precedent for Team Telecom's recommendation to revoke licenses without the agreements, as seen with China Unicom's license. According to a report from the Senate's Permanent Subcommittee on Investigations, Team Telecom officials acknowledged that where no security agreement existed, there was no formal legal basis for reviews and recommendations to revoke the license.²⁵

In 1998, the DOD requested the FCC develop a procedure to revoke licenses.²⁶ This is because the DOD expected that the security environment may change later. In such cases, the DOD mentioned the possibility of seeking a condition or revocation of the Section 214 authority, even if the review of the initial application provided a reasonable opportunity to conduct a national security review. However, the FCC's interpretation of foreign ownership regulations focused less on national security concerns at that time.²⁷ As the DOD claimed, times have changed, and foreign cyber activities, including those of China, are now seen as a new concern for U.S. national security. In the current national security landscape, licenses that were not concluded with an agreement can also be revoked if the FCC refers the application to Team Telecom.

5-2 Monitoring China Telecom, Pacific Networks, and ComNet

The Executive Branch had limited recourse to officially force a renegotiation of the agreement, unless the applicants submitted a new application. The revoked licenses of three Chinese companies (excluding China Unicom) illustrate this point well. The report from the Senate's Permanent Subcommittee on Investigations stated that Team Telecom did not start developing an interagency process for monitoring compliance of mitigation agreements until 2010 or 2011.²⁸ As we have seen, Team Telecom started monitoring on the record from as early as 2012. However, even after that, they did not update the agreements with Chinese companies in the late 2000s. As Table 9 shows, the mitigation agreement requirement has expanded with the times, from information security to supply chain measures, becoming stronger over time.

Table 9 Comparison of Mitigation Agreements (2007 – 2022)

Grant Year	2007	2009	2009	2022	2022	2022
Applicant Name	China Telecom	Pacific Networks	ComNet	Oktacom	Rakuten	Vocus
Mitigation Agreements	LOA	LOA	LOA	LOA	LOA	LOA
Certify CALEA (Communications Assistance for Law Enforcement Act) Compliance				•	•	•
POC (Point of Contact) or LEPOC (Law Enforcement Point of Contact)	•	•	•	•	•	•
Change to POC or LEPOC		•	•	•	•	•
PII for Foreign Persons with Access to U.S. Records				•	•	•
New Personnel Screening Policies				•	•	•
Network Diagrams and Topology Maps				•	•	•
Requests for Information or Legal Process from Foreign Person or Foreign Government	•			•	•	•
U.S. Records Storage and/or Access Outside of the United States	•	•	•	•	•	•
Discovery of Security Incident/ Other Incidents or Breaches		•	•	•	•	•
Discovery of Unauthorized Access to Customer Information				•	•	•
NIST-Compliant Cybersecurity Plan Network Systems Security Plan				•	•	•
Change to Network Operations Center				•	•	•
Principal Equipment and Equipment Vendor List				•	•	•
Outsourced or Offshored Service Providers List				•	•	•
Material changes (Change in Ownership and Service Portfolio)	•	•	•	•	•	•
Site Visits		•	•	•	•	•
Compliance report		•	•			
Annual Report				•	•	•

Note. Shaded areas highlight applications of Chinese companies' licenses in 2000s.

Older agreements, such as those signed before 2010, contained few provisions, were broad in scope, and provided little for Team Telecom to verify. This was exactly the case with Chinese companies in Table 9. Chinese firms launched new services, which were not envisioned when the agreement was originally negotiated. However, as J.W. Abbott stated, Team Telecom could not renegotiate mitigation agreements simply because they became outdated.²⁹ Now the Executive Branch can reevaluate to determine whether the agreement adequately reflects the security concerns of the time and negotiate a voluntary surrender at the appropriate time.

So far, we have discussed how Team Telecom has increased authority to overcome the difficulties of the existing review by formalization against the backdrop of China's global rise. We recognize multiple factors relating to formalization, and they leave room for a variety of interpretations. Thus, further research is needed by expanding the scope of FCC licenses using the method we applied in this study. However, to the best of our knowledge, no studies have used data methods regarding Team Telecom. We analyzed more than 4000 application records and provided an objective evaluation. Our approach enables us to analyze review trends on an ongoing basis in an expanding global market and will contribute to increased predictability for new licensees and applicants.

6. Conclusion: Increased Risks of Retroactive Revocation

This study discussed that how Executive Branch involvement changed before and after Executive Order 13913 was introduced, based on an analysis of the FCC's records from the U.S.—China perspective spanning more than two decades. A key contribution of this paper is the indication that formalizing Team Telecom increases the risk of retroactive revocation of existing licenses, which is not limited to Chinese operators. From April 2020, the licensing review results did not guarantee a future outcome for non-national licensees. Recent literature analyzed the Executive Branch review at the time of approval as a point of concern. However, this study reveals that post-approval reviews were identified as a new concern going forward.

¹ Tekir, G. (2020). Huawei, 5G networks, and digital geopolitics. *International Journal of Politics and Security*, 2(4), 113–35.

² Exec. Order No. 13913, 85 F.R. 19643, Establishing the committee for the assessment of foreign participation in the United States telecommunications services sector (2020).

- ³ FCC. (2020). Process reform for executive branch review of certain FCC applications and petitions involving foreign ownership (Report and Order, FCC 20-133). U.S. Federal Communications Commission.
- ⁴ FCC. (1998). Reply comments of the Secretary of Defense in the matter of 1998 biennial regulatory review Review of international common carrier regulations. U.S. Federal Communications Commission. https://www.fcc.gov/ecfs/file/download/2141780001.pdf.
- ⁵ FCC. (1997). Rules and policies on foreign participation in the U.S. telecommunications market and market entry and regulation of foreign-affiliated entities (Report and Order and Order on Reconsideration, FCC-97-398). U.S. Federal Communications Commission.
- ⁶ Sechrist, M. (2010). *Cyberspace in deep water: Protecting undersea communication cables by creating an international public-private partnership.* Prepared for Under Secretary for National Programs and Protection Directorate, Department of Homeland Security.
 - https://www.belfercenter.org/sites/default/files/files/publication/PAE_final_draft_-_043010.pdf.
- ⁷ Alexander Brown. (2017). Telecoms and Media. Law Business Research Ltd. NSA are also sometimes referred to as Network Security Agreements or National Security Agreements.
- ⁸ Hillman, J.E. (2021). *The digital silk road*. Profile Books Ltd.; Tsuchiya, M. (2020). *Cyber great game: Geopolitics of politics, economy, technology and data* (in Japanese). Chikura Shobo.
- ⁹ Bressie, K. (2020, April 8). President Trump Formalizes Team Telecom Process for Reviewing Foreign Investments in U.S. Telecommunications Market. Harris, Wiltshire & Grannis. https://www.hwglaw.com/wp-content/uploads/2020/04/HWG-Advisory-Telecom-Foreign-Investment-Review-Updated-8April2020.pdf
- ¹⁰ Watai, R. (2013). Regulation of foreign direct investment and the CFIUS review process: The ralls case (in Japanese). *Keio Law Journal*, 27, 139–59.
- ¹¹ CFIUS Laws and Guidance. (2018). Summary of the foreign investment risk review modernization act of 2018. U.S. Department of the Treasury. https://home.treasury.gov/system/files/206/Summary-of-FIRRMA.pdf
- ¹² Griffin, P. (2017). CFIUS in the Age of Chinese Investment. Fordham Law Review, 85(4), 1757-1792.; Suginohara, M. (2019). Regulating Inward Foreign Investment in the United States: The Politics of the Foreign Investment Risk Review Act of 2018 (in Japanese). The journal of global and inter-cultural studies, (21), 83–112.; Tarbert, H.P. (2020). Modernizing CFIUS. The George Washington Law Review, 88(6), 1477.
- ¹³ U.S.-China Economic and Security Review Commission. (2005, May 19 and 20). China and the future of globalization: Hearings before the U.S.-China economic and security review commission [One Hundred Ninth Congress, first session]. U.S. Government Publishing Office.
- ¹⁴ Abbott, J.W. (2013). Innovative governance models for emerging technologies. In E.G. Marchant, W.K. Abbott, B. Allenby (Eds.), *Network security agreements: Communications technology governance by other means* (pp. 214–34). Edward Elgar Publishing.
- ¹⁵ Chi Hung, K. (2011, November 30). *World trade transformed with the rise of China*. RIETI. https://www.rieti.go.jp/en/china/11113001.html

¹⁶ Carlin, J.P. (2016). Detect, disrupt, deter: A whole-of-government approach to national security cyber threats. *Harvard National Security Journal*, (7), 391-436. https://harvardnsj.org/wp-content/uploads/sites/13/2016/06/Carlin-FINAL.pdf

- ¹⁷ Committee on Homeland Security and Governmental Affairs. (2010). Congressional leaders cite telecommunications concerns with firms that have ties with Chinese government. Minority Media. https://www.hsgac.senate.gov/media/minority-media/congressional-leaders-cite-telecommunications-concerns-with-firms-that-have-ties-with-chinese-government
- National Security Division. (2020). Assistant attorney general for national security John C. Demers delivers keynote at ACI's sixth national conference on CFIUS: Compliance and enforcement. U.S. Department of Justice. https://www.justice.gov/opa/speech/assistant-attorney-general-national-security-john-c-demers-delivers-keynote-aci-s-sixth
- ¹⁹ FCC. (2019). China Mobile International (USA) Inc. application for global facilities-based and global resale international telecommunications authority pursuant to section 214 of the communications act of 1934 (Memorandum Opinion and Order, FCC-19-38). U.S. Federal Communications Commission.
- ²⁰ FCC. (2020). process reform for executive branch review of certain FCC applications and petitions involving foreign ownership (Report and Order, FCC 20-133), pp. 36-8. U.S. Federal Communications Commission.
- ²¹ Coats, D.R., Director of National Intelligence. (2019, January 29). Statement for the record on the worldwide threat assessment of the U.S. intelligence community. Office of Homeland Security Digital Library. https://www.hsdl.org/?view&did=820727
- ²² Exec. Order No. 13913, 85 F.R. 19643, Establishing the committee for the assessment of foreign participation in the United States telecommunications services sector in Sec.4 (iv) (2020).
- ²³ National Security Division. (2021). *FY2022 Performance Budget* [Congressional Submission]. U.S. Department of Justice. https://www.justice.gov/jmd/page/file/1398451/download
- ²⁴ Dilanian, K. (2012, May 5). Fears of spying hinder U.S. license for China Mobile. *Los Angeles Times*. https://www.latimes.com/business/la-xpm-2012-may-05-la-fi-us-china-mobile-20120505-story.html
- Portman R., Carper T. (2020). Threats to U.S. networks: Oversight of Chinese government-owned carrier s. U.S. Senate Permanent Subcommittee on Investigations Committee on Homeland Security and Gove rnmental Affairs. https://www.hsgac.senate.gov/imo/media/doc/2020-06-09%20PSI%20Staff%20Report%20-%20Threats%20to%20U.S.%20Communications%20Networks.pdf
- ²⁶ FCC. (1998). Reply comments of the secretary of defense in the matter of 1998 biennial regulatory review Review of international common carrier regulations (pp. 4-5). U.S. Federal Communications Commission.
- ²⁷ Cho, C.J. (2007). Deal or no deal: Reinterpreting the FCC's foreign ownership rules for a fair game. *Federal Communications Law Journal*, 60(1), 111.
- ²⁸ Portman R., Carper T. (2020). Threats to U.S. networks: Oversight of Chinese government-owned carriers (p. 45). U.S. Senate Permanent Subcommittee on Investigations Committee on Homeland Security and Governmental Affairs. https://www.hsgac.senate.gov/imo/media/doc/2020-06-09%20PSI%20Staff%2 0Report%20-%20Threats%20to%20U.S.%20Communications%20Networks.pdf
- ²⁹ Abbott, J.W. (2013). Innovative Governance Models for Emerging Technologies. In E.G. Marchant, W.K. Abbott, B. Allenby (Eds.), *Network Security Agreements: Communications Technology Governance by Other Means* (pp. 229). Edward Elgar Publishing.