

Rise of the E-Militias: Designated Terrorist Groups Infest Iraq's Digital Economy

By Michael Knights

Iraq's digital economy is one of its fastest-growing sectors, driven by an expanding youth population, a transition to e-governance services, and the potential for Iraq to become a regional data transit hub. As with militia monetization of Iraq's oil sector, the telecommunications industry is attracting the attention of U.S.-designated terrorist groups. They have two motives: to generate threat finances and to control and monitor data to strengthen their grip on the population and on Western diplomatic, military, and commercial entities inside Iraq. In the year before Iraq's November 2025 elections, the outgoing government of Prime Minister Mohammed Shia al-Sudani revealed the extent of militia penetration of the sector by awarding sensitive telecoms contracts to a now-sanctioned militia economic conglomerate, while also offering U.S.-origin equipment to militias and channeling lucrative 5G mobile telephony licenses exclusively to militia businessmen.

This study is the eighth in a series of *CTC Sentinel* articles since 2019 that have detailed the ongoing rise of the self-styled, Tehran-backed resistance (*muqawama*) factions in Iraq, and of Iran's growing dominance within the Iraqi state. These studies¹ initially focused on how the *muqawama* had achieved one element of state capture by establishing, formalizing, and assuring Iraqi government funding for the Popular Mobilization Forces (PMF), Iraq's equivalent of the Iranian Islamic Revolutionary Guard Corps (IRGC).² More recently, the series has begun to drill-down into militia penetration of specific sectors of the Iraqi political, security and economic systems.³ An article featured in the April 2025 issue of *CTC Sentinel* took a deep-dive into the unparalleled terrorist threat financing potential of the Iraqi oil sector.⁴ That study explained in detail how Iraq had become a terrorist-run state with greater resources than any of Iran's other proxy networks, the world's fifth-largest oil producer⁵ being run by U.S.-sanctioned groups behind the façade of a sovereign country.⁶

This study will take forward the chronology of the evolution of the Tehran-backed *muqawama* factions in Iraq by next exploring their penetration of telecommunications and data services in

Iraq. The piece draws upon the same kind of detailed interview process with U.S. and Iraqi subjects that underpinned the prior *CTC Sentinel* studies referenced above.^a This includes the author's networks of contacts and especially the citizen journalism that has made available numerous leaked contracts and Iraqi government documents shared with the author.^b To assess and assure their veracity, the author has taken the original and translated versions of the documents to former and serving Iraqi government officials, who checked the documents against known samples of the same format, seals, stamps, and signatures found in genuine documents within their possession.⁷

The overarching theme of this analysis is that, second only to the oil sector, closely monitoring Iraq's telecommunications sector should be a priority for counterterrorism and sanctions analysts. Domination of this sector brings not only enormous and growing threat finance opportunities to the Iran Threat Network, but also a new capacity to suppress dissent inside Iraq, to shape societal views, and to eavesdrop on the communications of Iraqi officials and foreign diplomatic missions. This should be of strong interest to any U.S. agency charged with the implementation of the maximum pressure effort on Iran's regime, most recently re-energized by the United States via National Security Presidential Memorandum 2 (NSPM-2).⁸

To begin with, the study will lay out the formula set by Iran itself for the domination of national information networks, which has subsequently been adopted in part by Lebanese Hezbollah, Yemen's Ansar Allah (Houthi) movement, and now by Iraqi terrorist groups and militias close to Iran. The article will then echo April 2025's analysis of militia penetration of Iraq's energy sector by describing the comparatively simple takeover of the Iraqi telecommunications ministry, state companies, and the regulator since 2022 under the government of Prime Minister Mohammed Shia al-Sudani.

Thereafter, the following sections will examine fast-tracked contracting that has given unprecedented access to Iraqi fiber optic networks to the Muhandis General Company,⁹ which has since been designated by the United States under counterterrorism

a Militia Spotlight's online blog and group profiles were established to track this process in detail and produce evidentiary building blocks, using legal standards of proof and certainty. The project collects militia statements in Arabic and other languages, archives evidence that risks being taken offline at a later point, and uses a data fusion process to synthesize information and analyze trends. The Militia Spotlight blog is at <https://www.washingtoninstitute.org/policy-analysis/series/militia-spotlight> and the Militia Spotlight profiles page is at <https://www.washingtoninstitute.org/policy-analysis/series/militia-spotlight-profiles>

b Five sets of Arabic-language soft copy documents were provided by contacts in the Iraqi telecommunications sector, Iraqi intelligence services, and the Iraqi Prime Minister's Office. These included three contracts that were also used as the basis of an investigative article by Robert Worth, "Iran's Last Ally in the Middle East," *Atlantic*, October 28, 2025. The contracts were also publicized by a range of Iraqi civil society activists and citizen journalists on social media.

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authorities.¹⁰ The article will also look at diversion of U.S. technologies to the PMF through abuses of end-user monitoring by the Iraqi Ministry of Communications. The penultimate section will identify new efforts by the PMF leadership to gain exclusive control of 5G mobile telephony in Iraq, and the concluding section will highlight emerging issues for intelligence analysts and telecommunications industry regulators to watch.

How Iran-Backed Terrorists Dominate Communications Sectors

There are two compelling reasons for Iranian and Iran-backed terrorist movements and their affiliates to seek control of digital telecommunications networks. First, these networks provide critical advantages for regime security forces in countries with non-democratic systems such as Iran, Houthi-controlled Yemen, and even within weak democracies dominated by Iran-backed terrorist groups such as Lebanon and Iraq. Control of telecommunications systems allows Iran and its partners to isolate their countries from piped data connections (inbound and outbound) in the rest of the world at moments of potential threat to the regime. The speed of internet connection can be selectively throttled in order to prevent domestic use of certain modes of communication (such as video-messaging and encrypted messaging services).¹¹

With sophisticated equipment provided by vendors including Russia and China, or developed inside Iran, data can be analyzed to provide the location of users, their pattern of communication with others, their efforts at encryption or bypassing of censorship, and even the content of text and voice communications of Iraqis and foreigners, including foreign diplomatic and military missions.¹² Controlling national regulators allows Iranian and pro-Iran factions to gain the approvals to import such systems, while potentially denying them to rivals. Conversely, control of telecommunications systems also allows the Iranian regime and Iran-backed forces greater ability to secure their own messaging and device security by dominating public systems and by establishing new secure networks for their own exclusive use.¹³

An important secondary objective of controlling telecommunications are the economic benefits of monetizing data access within and through these countries. By seizing monopoly control of international internet connectivity, a government can set the price of internet services without competition and can control the speed and performance of providers.¹⁴ Key infrastructure can be nationalized at will, for instance allowing terrorist and militia actors to “piggyback” on existing fiberoptic lines and microwave or cellular towers, significantly lowering the cost of entry to the market for Iran-linked factions.¹⁵ Preferred access to superior service offerings—such as 5G coverage—can be channeled to Iran-linked entities in order that they profit first and foremost from such advances.¹⁶ And finally, unutilized broadband throughput capacity can be sold to other users outside the country, an important potential source of U.S. dollars or other hard currency for U.S.-sanctioned persons and groups.¹⁷

Iran's Digital Control Playbook

To achieve these fruits, Iran's security agencies have developed a playbook—not a literal publication but rather a methodological blueprint—that is increasingly being adopted in many respects by other Axis of Resistance members in Lebanon, Yemen, and now Iraq. In Iran, the playbook was conceived in the early 2000s and

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accelerated after the regime suffered a serious scare in the 2009 “green movement” protests.¹⁸ From 2013 to the present year, the planned National Information Network (NIN) was reportedly 60 percent completed at a cost of \$6 billion,¹⁹ during which time both Lebanese Hezbollah^c and Yemen's Houthi movement^d have sought to rapidly mimic the effort. The key elements of the playbook, which will be applied to the Iraq case study in subsequent sections, comprise the following.

Utilize a single internet gateway. A single internet gateway is a system whereby all landline and subsea internet cables are only connected to a host government controller. To be connected to the global internet, local Internet Service Providers (ISPs) must be licensed by the government and work under their terms.²⁰ The only alternate way to access the global internet is a satellite-based internet provider, for instance Elon Musk's Starlink.^e

Control key agencies. For optimal control of a nation's telecommunications sector, one must ideally control the national chief executive (Supreme Leader, president, prime minister),

- c Lebanese Hezbollah has executed the playbook to a significant degree. The Ministry of Telecommunications, the regulator (Telecommunications Regulatory Authority), and the state-owned phone and fiber optic operator OGERO are all vulnerable to Hezbollah pressure, both via parliamentary committees and through physical intimidation. Commercial ISPs and providers with foreign joint venture partners have been squeezed out of the sector. Hezbollah has its own fiber optic network that the state cannot access, while the state is unable to prevent Hezbollah from accessing the national grid. Deep Packet Inspection technology has been detected in the Lebanese environment. See “Freedom in the World 2025: Lebanon,” Freedom House, 2025; “Hezbollah's Telecom Network Reportedly Remains Fully Intact,” This Is Beirut, September 26, 2024; and Hanin Ghaddar, “Hezbollah Takes Aim at Lebanon's Central Bank and Telecom Sector,” Washington Institute for Near East Policy, May 4, 2020.
- d The Houthis hit the ground running after their takeover of Sanaa in September 2014, taking over the Ministry of Telecoms and Information Technology, as well as all the public and private telecoms providers and ISPs in Houthi-controlled Yemen, including the Public Telecommunications Corporation, the General Company for Regulating Telecommunications and Post, and TeleYemen. The Houthis banned Starlink, blocked numerous foreign news sites and encrypted messaging apps, installed Deep Packet Inspection technologies and IMEI tracking, and reportedly developed some localized secure fiber optic networks of their own. Houthi monetization of the telecoms sector is estimated to raise around \$150 million per year. For a breakdown of the Houthi use and abuse of their control of the internet, see “Letter dated 21 February 2023 from the Panel of Experts on Yemen addressed to the President of the Security Council,” U.N. Security Council, February 21, 2023, pp. 33-34 and “The Houthis' Use of Technology for Repression,” Counter-Extremism Project, October 2023.
- e Starlink gets around national censorship primarily by bypassing the physical, ground-based internet infrastructure that governments control and monitor, including single national internet gateways linked to terrestrial fiber-optic lines. For a how-to guide on using Starlink to bypass national systems, see Colby Baber, “Using Starlink In Unsupported Countries,” Dishlink, November 8, 2023.

the communications ministry,^f the national telecommunications regulator (if separate from the ministry),^g and the state telecommunications operator^h (which usually directly operates infrastructure or does so as the lead partner in a public-private partnership. Typically, the blueprint involves removal of commercial competition to state-run telecoms, which reduces foreign involvement, increases fees and government take, and often reduces accountability for poor service.^{21 i}

Access fiberoptic lines and microwave towers. Through the above dominance of institutions, the Iranian regime or Iran-backed elements have the ability to physically access submarine and land-based cable landing stations at the country's borders, plus fiberoptic junction rooms and data centers, even as localized as fiber-to-the-home connections to individual residences.^j This provides the access needed for service denial, speed reduction, and intrusive monitoring of traffic data and even content.^k

Import and use Deep Packet Inspection (DPI) technologies. Using this access, the Iranian state and its partners can gain access to IP addresses and unique IMEI numbers of individual devices, and then correlate those addresses or numbers with locations, other personal devices, and the use of privacy measures (virtual private networks, encryption, and SIM card-switching). When combined with throttled speed and other measures, users can be channeled toward insecure communications where data and voice content can also be accessed.^l

Militia Capture of Telecommunications Institutions

In one form or another, Iran-backed factions in Iraq have rapidly accelerated their application of the above playbook under since the formation of Prime Minister Mohammed Shia

al-Sudani's government in October 2022.²² Prior to al-Sudani's term, the Iraqi *muqawama* had only tinkered at the margins of the telecommunications sector, usually for profit as opposed to establishing security control.²³ Lebanese Hezbollah-linked businessmen connected to the U.S.-sanctioned Iraqi terrorist Shibl al-Zaydi made the first tentative steps toward cashing in on telecoms in 2018-2020,^m but their approaches using U.S.-sanctioned persons were too obvious and generally attracted the scrutiny of the U.S. government, leading to these efforts being blocked by the first Trump administration.²⁴ Under Prime Minister Mustafa al-Kadhimi in 2020-2022, the Kata'ib Hezbollah terrorist group was also blocked from setting up their own fiber-optic landline communications from the Iranian border to the Najaf and Karbala area.²⁵

What changed under al-Sudani was the rapid accumulation of control by militias of the Prime Minister's Office, the Ministry of Communications and its subsidiary operators, plus the regulator, the Communications and Media Commission (CMC). The rot started at the very top, with the appointment of al-Sudani by the Coordination Framework (CF) bloc.²⁶ This bloc included U.S.-designated terrorist organizations Asaib Ahl al-Haq (AAH)²⁷ and Kata'ib Hezbollah,²⁸ as well as the U.S.-formed Badr Organization.²⁹ AAH leader Qais al-Khazali thereafter characterized al-Sudani diminutively in a November 2022 television interview as that of a "general manager."ⁿ The militias—not al-Sudani—appointed all the cabinet ministers^o in what they called "the resistance government."³⁰

In al-Sudani's cabinet, the Minister of Communications was Hiyam al-Yassiri,^p a ministry advisor whose October 2022 candidacy was sponsored by U.S.-designated human rights abuser Falah al-Fayyadh.³¹ As *CTC Sentinel* readers will recall, al-Fayyadh is the chairman of the Popular Mobilization Forces (PMF), the emergency reserve force raised in 2014 to fight the Islamic State but which quickly became a proto-IRGC parallel military in Iraq under the leadership of a cadre of U.S.-designated terrorists, the bulk of whom were seconded from Kata'ib Hezbollah.³² Al-Fayyadh

f In Iran's case, the Ministry of Communications and Information Technology.

g In Iran, this is nominally the Communications Regulatory Authority, but increasingly, the Supreme Council for Cyberspace also plays a role.

h In Iran, this is the Telecommunications Company of Iran, which was sold in 2009 to a consortium called Etemad Mobin Development, which consisted of the IRGC and the Execution of the Imam Khomeini's Order (EIKO), a foundation controlled by Supreme Leader Ali Khamenei. See "The Revolutionary Guards bought eight billion dollars of telecommunications shares," BBC Persian, September 27, 2009.

i Ghasseminejad notes that "the IRGC's takeover of Iran's communications infrastructure gave it free rein over the industry. The forcing of high-cost, low-quality service on customers has been one price Iranians have had to pay for the concentration of the communications industry in IRGC hands."

j With physical access, one can insert optical splitters on cables in order to obtain a copy of the optical signal, which includes the entirety of voice, video, and other data carried by the line. The author consulted with a number of communications experts to write this article, including Iraqi officials with experience of Iraq's fiber optic system.

k Throttling bandwidth can be an effective tactic to push users off encrypted apps. While the encryption itself is not broken by the throttling, the resulting slow speeds can make the applications functionally unusable. See Wilson Wahome, "Behind the scenes: Weaponizing throttling," *Democracy in Africa*, November 2, 2022.

l As The Intercept revealed in 2022, Iran operates a system called SIAM. "SIAM is a computer system that works behind the scenes of Iranian cellular networks, providing its operators a broad menu of remote commands to alter, disrupt, and monitor how customers use their phones. The tools can slow their data connections to a crawl, break the encryption of phone calls, track the movements of individuals or large groups, and produce detailed metadata summaries of who spoke to whom, when, and where." Sam Biddle and Murtaza Hussain, "Hacked Documents: How Iran Can Track and Control Protesters' Phones," *Intercept*, October 28, 2022.

m The early period of militia interest in telecoms was principally protection racket activity: shaking down ISPs and telecoms companies with threats to their staff and their infrastructure. Other groups tapped into fiber optic lines to "smuggle internet" into the market at reduced rates. Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence community contacts, 2020-2025; exact dates, names, and places withheld at request of the interviewees.

n This appears to have been a calculated action to show al-Khazali's power, by disparaging Iraq's prime minister – the country's highest executive and the commander-in-chief of the military – by comparing him to a low-ranking bureaucrat. Hamdi Malik, "'Sudani Is a General Manager': How Militias View Iraq's New Prime Minister," *Militia Spotlight*, Washington Institute for Near East Policy, December 1, 2022.

o This is a well-established consensus view among Iraq-watchers. While other premiers had been able to pick certain ministers to serve alongside them in the cabinet, either due to the size of their win (and resultant surplus entitlement beyond just the PM's role) or by special dispensation due to the conditions of cabinet formation, al-Sudani picked no ministers in his cabinet. Author interviews, multiple U.S. and Iraqi intelligence community contacts, 2022-2023; exact dates, names, and places withheld at request of the interviewees.

p Minister of Communications Dr. Hiyam Aboud Kazem al-Yassiri is a planning and administration expert, an academic with the University of Technology in Baghdad, with a family background from Baghdad and Najaf. The minister is open in her biography about her family's involvement in the Daawa and later Fadhila movements, including persecution under the Saddam Hussein regime for Daawa links. The minister's bio can be found at <https://www.moc.gov.iq/?article=1109>

was designated by the United States after he used his authority as the PMF chair and (then) Iraq's National Security Advisor to orchestrate the killings and abductions of unarmed protesters in the 2019 "Tishreen" youth uprising.^q Al-Yassiri's political and sectarian background is from the Fadhila (Virtue) Party, a smaller sub-block within the CF.^r Within the post-2022 ministry, al-Yassiri has appointed a deputy minister for technical affairs, Buraq Abdal-Qader Abdal-Karim,³³ from the inner circle of another U.S.-sanctioned Iraqi politician, Khamis Khanjar, who was designated for his corrupt activities in favor of the Iran-backed militias.³⁴ She also appointed a ministry head of media relations, Omar Abdal-Razaq Muhsib, who was previously al-Fayyadh's personal photographer in the PMF leadership office.³⁵

The regulator, the CMC, was likewise packed with CF appointees since 2022.³⁶ Originally set up by the U.S.-led occupation authorities in 2004 to manage communications and media licensing and regulation, the CMC has (in the assessment of this author) been recently twisted into a tool of repression that reinforces, not acts as a check upon, the Ministry of Communications.³⁷ Under the al-Sudani government, the CMC board fell under the domination of CF factions, with all six members drawn from Shi'a Islamist parties, including Mahmoud al-Rubaie, spokesman for the political office of the U.S.-designated terrorist group Asaib Ahl al-Haq (AAH).^{38s} (The same happened to the state-run Iraq Media Network on February 28, 2024, when the Iraqi cabinet placed its board under the majority control of three U.S.-designated movements.^{39t}) CMC issued draconian new draft social media regulations in March

2023 and began keyword-based and informant-based blocking and banning of digital media in the same month.⁴⁰ Lacking a data protection standards agency or a specific cybersecurity regulator, CMC is Iraq's repository of personal data from all SIM card registrants and ISP users.⁴¹

In the assessment of this author, working together, the CF-appointed al-Sudani, al-Yassiri, and the CMC have worked rapidly to emulate the Iranian playbook within Iraq's telecommunications sector since 2022.⁴² The following sections identify recent developments that have placed the centralized fiber optic backbone under the control of U.S.-designated entities.

Fast-Tracking Militia Control of Iraq's Fiber-Optic Backbone

On April 23, 2024, the Iraqi Minister of Communications Hiyam al-Yassiri sent a letter to the General Secretariat of the Council of Ministers (the Iraqi cabinet) marked "extremely urgent" and requesting that two fiber optic contracts be exempted from contracting rules and regulations.⁴³ The two contracts included one to rehabilitate and maintain the existing fiber optic network, and the other to build Iraq's first new alternate fiber optic network in decades.⁴⁴ The letter justified the fast-tracked and non-competitive status with the claim that the ministry "desperately need[ed]" the accelerated contracting due to "the increase in digitalization and automation in state institutions" and to "address the need for the increase in demand of internet in state institutions, GSM providers and Iraqi citizens," and also to enable "data transit projects through Iraq."⁴⁵ At no point in the letter was any reason given for the sudden, specific urgency.⁴⁶ Until that time, it was unprecedented for the Ministry of Communications to single-source a major contract without a competitive bid.⁴⁷

Despite the paucity of a specific justification for acceleration, both fiber optic contracts were then processed with extraordinary, unheard-of speed:^{48 u} The contracts were both added, with zero notice and none of the usual preparation by the cabinet staff, to the same day's cabinet agenda.^{49 v} According to a April 23, 2024, letter from the Ministry of Communications' Minister's Office, signed by Minister Hiyam al-Yassiri,⁵⁰ both were approved to be non-competed awards by the cabinet on the same day: April 23, 2024.⁵¹ Again, most irregularly, the Ministry of Communications received notice back on the same day, April 23, 2024.⁵² Unusually, cabinet consideration of the contracts was not included in the publicly released cabinet minutes.⁵³ The two contracts were then negotiated and signed in a mere two-month window in September to November 2024.⁵⁴ Taken in combination, these are very strong indicators of political favoritism, especially when the ministry's typical record of often slow and grudging approvals is considered.^w

The awardee of both contracts was the Muhandis General

q The United States designated Falah al-Fayyadh for human rights abuses during the October 2019 crackdown. See "Treasury Sanctions Iran-Backed Militia Leaders Who Killed Innocent Demonstrators in Iraq," U.S. Department of the Treasury, December 6, 2019.

r The Fadhila Party (officially the Islamic Virtue Party; Hizb al-Fadhila al-Islamiyya al-Iraqi) is an Iraqi Shi'a Islamist political party that has a connection to both the Daawa Party and the Sadrist Trend formed by Mohammed Sadiq al-Sadr. For a recent update on Fadhila, see "Deep Dive: The stakes for Shiite parties in Iraq's elections," Amwaj, June 6, 2025.

s "Mahmoud al-Rubaie, who served as spokesman for the political office of the U.S.-designated terrorist group Asaib Ahl al-Haq before his appointment to the CMC board. Amtar Rahim al-Mayyahi, a former Badr Organization representative on the Basra provincial council. Her husband is high-ranking Badr member Abu Ahmed al-Rashed. Mohammad al-Hamad, a figure close to State of Law Alliance chief Nouri al-Maliki. Previously, Hamad served as general manager of Afaq TV. He is now deputy head of the Iraqi Radio and Television Union, an offshoot of Iran's Islamic Radio and Television Union (IRTVU). In October 2020, the U.S. Treasury Department's Office of Foreign Assets Control designated IRTVU and other Iranian entities for obtaining American voter registration data in order to influence U.S. elections and incite unrest. Moayyad al-Lami, head of the Iraqi Press Syndicate, affiliated with Prime Minister Sudani. The only CMC board member not drawn from CF factions is Abdaladhim Mohammad al-Saleh, affiliated with the Sadrist movement." Michael Knights, Hamdi Malik, and Crispin Smith, "Profile: Communications and Media Commission," Militia Spotlight, Washington Institute for Near East Policy, May 15, 2023, last updated February 19, 2025.

t "Awsam Majid Ghanem Hassan al-Mohammedawi, a media operator of the U.S.-designated terrorist group Kataib Hezbollah (KH) ... Thaeir Hattat Ibrahim al-Ghanemi, who is close to multiple militias, particularly the U.S.-designated terrorist groups KH, AAH, Kataib Sayyid al-Shuhada (KSS), and Harakat Hezbollah al-Nujaba (HaN) ... Sanaa Saied Hadi Karumi, a representative of U.S.-sanctioned human rights abuser Rayan al-Kildani, a Christian member of the IMN board who works for Holy Quran Radio." Ameer al-Kaabi, Michael Knights, and Hamdi Malik, "Profile: Iraqi Media Network," Militia Spotlight, Washington Institute for Near East Policy, February 29, 2024.

u Same-day processing of major contracts from ministry to cabinet and back again, fully-signed, is unheard-of.

v The cabinet secretariat usually takes weeks (or at least a week) to process a new request, schedule it on the cabinet agenda, and prepare a legal opinion on the eligibility of the matter for cabinet approval.

w To give an example provided by the Ministry of Communications itself, the ministry has been very slow to activate fiber-optic distribution terminals constructed by its primary private sector partner, Earthlink. See "Internet providers prioritize profits: 3.5 million fiber optic lines ready in Iraq, but 700k are in use, says communications minister," 964 News, July 24, 2024.



Iraq's fiber optic infrastructure (map produced by Jules Duhamel)

Company for Construction, Engineering and Mechanical, Agricultural and Industrial Contracting (hereafter shortened to Muhandis General Company, or MGC).⁵⁵ Both contracts were signed by MGC's Dhia Johi Hussein* "as per the power of attorney issued by Muhandis General Company" on November 25, 2024, (maintenance of existing network) and December 18, 2024 (creation of new alternate network).⁵⁶

Since its formation on November 28, 2022,^y MGC had been identified as a construction arm of the PMF, named after Abu Mahdi al-Muhandis, the U.S.-designated terrorist and Kata'ib Hezbollah founder who was killed by a U.S. airstrike on January 3, 2020.⁵⁷ It was described as being modeled on the IRGC's Khatam al-Anbia construction arm in Iran—that is, a commercial vehicle with unique advantages in winning business, designed to be unlimited in terms of activities, sectors, and the types of government assets transferred to it.⁵⁸ Beginning in 2018, Iran-backed militias and politicians pressured successive prime ministers to facilitate the creation of

such an economic conglomerate under the PMF's control.^z

The MGC was later sanctioned by the United States⁵⁹ on October 9, 2025, "pursuant to E.O. 13224, as amended, for having materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services to or in support of, Kataib Hizballah and the IRGC Qods Force; and for being owned or controlled or directed by, or having acted or purported to act for or on behalf of, directly or indirectly, Kataib Hizballah."⁶⁰ The U.S. Treasury specifically noted that "the Muhandis General Company is controlled by Popular Mobilization Commission Chief of Staff and U.S.-designated Kataib Hizballah leader Abd al-Aziz Malluh Mirjirash al-Muhammadawi (Abu Fadak)."⁶¹ The Treasury concluded: "Muhandis General Company, under the control of Kataib Hizballah, uses a sub-contracting method to divert funds from Iraqi government contracts."⁶²

MGC Fully Accesses Iraq's Existing Fiber Optic Network

The first contract awarded by the Ministry of Communications to the Muhandis General Company was entitled "Rehabilitation and Development Contract – National Fiber Optic Network Routes," which was signed on behalf of the MGC General Manager Falah

x Iraqi commercial records show Dhia Johi Hussein to be a shareholder in Ishraqa al-Baraka Telecomm LLC, Al-Baraka Industrial Investments Ltd, and Al-Sagr Petroleum Services LLC. See author's own dataset and those of other Iraq-focused investigators, which include current Iraqi corporate databases.

y After replacing al-Kadhimi in 2022, Prime Minister Mohammed Shia al-Sudani announced the formation of the MGC in his sixth cabinet session (November 28, 2022). Michael Knights, Crispin Smith, and Hamdi Malik, "Profile: The Muhandis General Company," *Militia Spotlight*, Washington Institute for Near East Policy, May 17, 2023, updated November 5, 2024.

z The first two attempts in 2018 and 2020 – named Motassim and Al-Rashid – were blocked by international pressure and opposition from the government of former prime minister Mustafa al-Kadhimi. This is described in Michael Knights, Hamdi Malik, and Crispin Smith, "Iraq's New Regime Change: How Tehran-Backed Terrorist Organizations and Militias Captured the Iraqi State," *CTC Sentinel* 16:11 (2023).



Signature page from the contract awarding the National Alternate Fiber Optic Network to the Muhandis General Company. The circular black stamp on the right is the MGC official stamp, overlapping by the Ministry of Communication's hollow circle stamp to the left.

al-Fayyadh by Dhia Johi Hussein on November 25, 2024.⁶³ The contract included “excavation and execution of new routes, development of the channels for the fiber optic cable routes, provision of maintenance services and warranty for the supplied materials for a period of three years.”⁶⁴ The contract allows MGC unlimited access to fiber optic vaults that handrail major roads to install new cable and transmission equipment along the way.⁶⁵ The value of the contract is interesting: just 15.70 billion Iraqi dinars (\$11.98 million), which Iraqi businesspersons and officials canvassed by the author viewed as a very low number for a 285-day project involving 25 routes in 10 governorates.⁶⁶ This approach to pricing is typically behavior intended to prepare the way for a no-bid award, with costs usually rising in implementation, a common formula used by politically connected contractors in Iraq.⁶⁷ The contract commits MGC to send ministry personnel for “on-the-job training” in Oman and Egypt.⁶⁸

aa At just under \$12 million, the project lacks the margins typically associated with this kind of contracting and might even have been provided at cost or a slight loss. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.

The second contract awarded by the Ministry of Communications to the Muhandis General Company was entitled “Contract for the Establishment of the National Alternate Fiber Optic Network (First Phase).”⁶⁹ Again, it was signed on behalf of the MGC General Manager Falah al-Fayyadh by Dhia Johi Hussein, this time on December 18, 2024.⁷⁰ The contract envisages the creation of a new network referred to in the contract only as “the eastern, northern and Baghdad routes”—an unknown length of fiber optic, though the parts list suggests 1,152km of new cable being procured.⁷¹ The value of the contract is 31.75 billion Iraqi dinars (\$24.23 million), a more normal amount for the 365-day project.⁷² On May 30, 2024, another letter (this time from the al-Sudani cabinet secretariat) chivvied the Ministry of Communications with encouragement to account for any delay in executing the contract, roughly one month after its cabinet approval on April 23, 2024.⁷³

This contract broke a long-standing precedent⁷⁴ that the Ministry of Communications’ own state-owned Informatics and Telecommunications Public Company (ITPC) laid all new fiber optic cabling in Iraq.^{ab} The de facto leaders of MGC—Kata’ib Hezbollah’s Abu Fadak and Falah al-Fayyadh—had previously tried to break the monopoly on fiber optic-laying, in 2020-2021.^{ac} The value of major new northern Baghdad and eastern fiber optic lines installed by MGC are assessed by the author as two-fold: They offer surveillance and internet-blocking capabilities in the cross-sectarian areas where the PMF garrisons Sunni communities, and they can become a source of future funding.⁷⁵ PMF units have, as recently as 2020, been discovered implanting illegal taps on fiber optic lines for the financial benefit of stealing and reselling the bandwidth to ISPs and small networks.^{ad} These fiber optic lines can also serve as secure communications channels for the PMF and its constituent militias and U.S.-designated terrorist groups.^{ae}

PMF Satellite Internet, Powered by U.S. Equipment

A third contract involving the PMF⁷⁶ casts a spotlight on another communications-related risk—that of the PMF gaining access to Western and specifically U.S. satellite internet technology. The PMF are not yet sanctioned by the United States, though their subsidiary, MGC, is, and (in this author’s assessment) it may not be long before more elements of the force are sanctioned.⁷⁷ Nevertheless, even

ab ITPC is a subsidiary of the Ministry of Communications, with special responsibility for landline communications, including a historic monopoly on laying new fiber optics.

ac They sought to lay a new landline between the Iranian border and major Shi’a religious pilgrimage areas. Author interviews, multiple Iraqi intelligence contacts, 2023; exact dates, names, and places withheld at request of the interviewees.

ad In June 2020, a so-called “shock and awe” effort by law enforcement uncovered networks that were reselling bandwidth worth \$10-20 million per month. Author interviews, multiple Iraqi telecoms-focused contacts, 2023-2024; exact dates, names, and places withheld at request of the interviewees.

ae Both Iran and Lebanese Hezbollah are reported to have created expansive dedicated fiber optic networks in parallel to national civilian systems. The issue of a secure landline grid for major Iraqi militias has been a recurring theme on anecdotal reporting among Iraqi militia networks, particularly as regards Asaib Ahl al-Haq. For Lebanese Hezbollah, see “Hezbollah’s Communications Infrastructure – A Strategic Asset For Its Operational Activity,” Alma Research, March 9, 2021. For Iraq, the author is describing recurring indicators that AAH and other Iraqi groups have sought to build landline communications that reduce their vulnerability to eavesdropping, geolocation, and targeting. Author interviews, multiple Iraqi intelligence contacts, 2018-2025; exact dates, names, and places withheld at request of the interviewees.

without formal sanctioning, the U.S. government has long sought to avoid allowing any of its security assistance to directly benefit the PMF.^{af} When Kata'ib Hezbollah elements within the PMF seized and held seven U.S. M1 Abrams tanks, the U.S. effort to recover those vehicles was energetic, persistent, and (eventually) largely successful.⁷⁸

On November 28, 2024, the U.S.-sanctioned Falah al-Fayyadh signed a contract with the Ministry of Communications for the provision of satellite communications systems to the PMF headquarters.⁷⁹ The contract, entitled "Contract for the Supply of Strategic Satellite Communications Systems for the Popular Mobilization Committee,"⁸⁰ was countersigned by Nabeel Abdal-Baqi,⁸⁸ then the general manager of the Ministry of Communications' Al-Salam State Company (for telecommunications).^{ah} Though relatively small in size (1.09bn Iraqi dinars or \$832,000), the contract's Price Technical Annex contains a list of Kymeta U8 Very Small Aperture Terminal (VSAT) equipment made in the United States.⁸¹ (Most of the Table of Quantities in the contract identify U.S. and European-origin equipment.⁸²) In the author's assessment, these systems may have been sold in good faith to the Iraqi Ministry of Communications, in the belief that the ministry is the end-user, while actually the ministry is reexporting them to the PMF, which would probably not be viewed favorably by the U.S. government.⁸³

Exclusive 5G Rights Being Fast-Track to Unknown Parties

The next step for militias and terrorist groups within Iraq's communications sector is the domination of long-awaited faster mobile telephony. While much of the world is experiencing 5G wireless broadband standard, most of Iraq is still stuck at 4G and some communities even at 3G.⁸⁴ In the assessment of the author, that means that a breakthrough moment and a huge commercial opportunity is awaiting whoever can unlock 5G in Iraq,⁸⁵ which will raise average internet speeds from around 30 megabits per second (mbps) to 1,000 mbps.^{ai} Though Iraq has struggled for many years to create a formula to enable a public-private partnership to install 4G, let alone 5G, the period since November 2024 has witnessed what this author and Iraqi telecoms experts assess to be another improbable acceleration in deal flow as militia-linked firms have made their play to gain exclusive control of 5G service.⁸⁶

The leading edge of the 5G effort became visible in November 2024 when a populist opposition party, the New Generation Movement, exposed concerns that 5G would be offered in a no-bid award.⁸⁷ The talk of the town amid Iraqi businessmen in late 2024 was then that a big name, a foreign investor with a strong

brand, would be used as a respectable wrapper for a consortia largely composed of Iraqi investors linked to CF parties.^{aj} In March 2025, the effort went into high-gear with the beginning of the formation of the National Mobile Telecommunications Company (NMTC)^{ak} by the Ministry of Communications and its Informatics and Telecommunications Public Company (ITPC) subsidiary, with funding from the State Employees' Pension Fund, the Trade Bank of Iraq (TBI), and Al-Salam General Company of the Ministry of Communications.⁸⁸

In the author's assessment, the deal was pockmarked by irregularities, fitting neither into the category of an advantaged state-owned enterprise working in the national interest, nor a private sector-led effort subject to competitive bidding rules.⁸⁹ To speed its progress and reduce the costs of the 5G license, the CMC instructed existing private sector players that the NMTC would be allowed to piggyback on telecoms towers constructed by the existing providers, none of whom were able to bid for the 5G contract.⁹⁰ The NMTC could not or would not answer the judiciary's standard inquiries about such a telecommunications project—such as the future location of computer servers—nor was a security committee formed from the relevant government agencies to review the sovereign and security risks posed by the project.⁹¹ As a result, an Iraqi specialist security judge placed a hold on the 5G contract in October 2025, aiming to prevent the deal from being railroaded through before the end of the al-Sudani government (i.e., the November 11, 2025, general elections in Iraq).⁹² The hold remained in place by the time of writing on November 13, 2025, by which time the al-Sudani government was relegated to caretaker status awaiting new government formation.

Looking Deeper at the 5G Consortia

The consortia put together to rush the 5G contract into existence was designed in an ingenious manner. It was brought into being in a set of meetings in Oman in 2024,⁹³ attended by Minister of Communications Hiyam al-Yassiri and two key political figures, Qais Saeed al-Ameri and Ahmed Mutawa al-Saeedi. Qais Saeed al-Ameri was then the Iraqi *charge d'affaires* in Oman (he is now full ambassador), and he is the brother-in-law of Falah al-Fayyadh.^{94 al} Ahmed Mutawa al-Saeedi, also known as Abu Yusuf al-Saeedi, is a business agent of various CF parties in Oman, and is a brother-in-law to Falah al-Fayyadh's son Raed.⁹⁵

As Iraqi MPs and businessmen feared, the involvement of a reputable foreign operator, Vodafone, was minimal in nature, limited

af The United States has historically not provided any security assistance to the PMF. See the history laid out in Michael Knights, Hamdi Malik, and Aymenn Jawad Al-Tamimi, "Honored, Not Contained: The Future of Iraq's Popular Mobilization Forces," Washington Institute for Near East Policy, March 23, 2020.

ag Like Minister Hiyam al-Yassiri, Abdal-Baqi was a Fadhlila Party member. Author interviews, multiple Iraqi political contacts, 2025; exact dates, names, and places withheld at request of the interviewees.

ah The Al-Salam company has responsibility for approving the licensing of all devices that potentially impact frequency management, including VSAT equipment and also jamming, navigation, CCTV, and sensing equipment.

ai Freedom House states that in 2024, "the median fixed-line broadband download and upload speeds [in Iraq] were 33.99 Mbps and 31.39 Mbps, respectively." "Freedom in the World 2025: Iraq," Freedom House, 2025.

aj The non-operatorship of Vodafone and its use largely as a big-name advisor is the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees. Some useful discussion can be found here, including alleged leaked documents cited by Iraqi journalist Qusay Shafiq that detailed a mere \$62 million worth of financial commitments to Vodafone. These claims have not been independently verified. See "Judicial freeze: Iraq's new national 5G carrier on hold," Shafaq News, October 13, 2025.

ak The NMTC was authorized by the Iraqi Ministry of Trade Registrar of Companies on September 3, 2025. An electronic copy of the registration certificate is in the author's possession and has been evaluated as genuine by multiple experts in the Iraqi cabinet and ministry procedures.

al Qais al-Ameri was the last chief of staff to the militia-appointed Prime Minister Adel Abdal-Mahdi in 2019.

to consulting support and brand use,^{am} but the use of a major logo guaranteed strong U.K. and U.S. government lobbying in favor of the deal, regardless of warnings about potential militia involvement in the deal.^{an} In reality, neither Vodafone nor the main equipment provider Nokia has a major role in the project.⁹⁶ The NMTC instructed Vodafone to select Nokia as the technology provider,^{ao} and Nokia was directed by the Ministry of Communications to select local firms Enkidu Information Technology and by Atlas for Information Technology and Security Solutions.⁹⁷ In the author's assessment, the whole 5G deal in 2024-2025 appears to have been structured around Enkidu and Atlas.⁹⁸

These companies share a number of similarities. For instance, they both share the same accountant, a man called Hossein Abdal Zahra al-Azzawi, who is a recurring figure in CF-linked oil smuggling and Iran sanctions evasion networks.^{ap} Enkidu has been linked by some contacts of the author to the operation of Deep Packet Inspection technology inside Iraq, in particular correlation of phone IMEI signatures and IP addresses to locations and proximity to other users.⁹⁹ A major shareholder in Atlas Information Systems (one of a chain of Atlas-named companies) is Ghazzi Faisal Fahad al-Fayyadh, the brother of U.S.-sanctioned PMF chairman Falah al-Fayyadh.^{aq}

Next Steps for the Digital Terrorist Economy in Iraq

In the assessment of the author, the pace of digitalization in Iraq is likely to continue at breakneck speed, creating major

“The pace of digitalization in Iraq is likely to continue at breakneck speed, creating major opportunities for the Iranian regime, Iran-backed terrorists and militias in Iraq, and even foreign terrorist groups such as Lebanese Hezbollah and the Houthis.”

opportunities for the Iranian regime, Iran-backed terrorists and militias in Iraq, and even foreign terrorist groups such as Lebanese Hezbollah and the Houthis. In the coming years, vast swathes of personal and societal data will become digital as the Iraqi economy moves away from paper records and cash transactions.¹⁰⁰ Iraq will keep pushing toward high-speed fiber optic coverage, a role in international communications corridors, broader e-government, and development of a digital economy.¹⁰¹ In the author's view, voter registers, electronic payment systems, food rations, health insurance, student portals, and e-visa systems are all fertile ground for digital surveillance and taxation by Iran-backed actors in Iraq.¹⁰²

The spectrum of players in this space defies simple characterization. Already, it is apparent (in the assessment of the author) that Iran-backed groups within the CF are competing as much as collaborating in the domination of digital systems.¹⁰³ There are various competing camps, including but not limited to the Kata'ib-Hezbollah-led PMF leadership under Abu Fadak; the related but separate PMF network linked to Falah al-Fayyadh and his sponsored Minister of Communications Hiyam al-Yassiri; and a sprawling economic office within Asaib Ahl al-Haq led by U.S.-designated Laith al-Khazali, the brother of AAH leader Qais al-Khazali.¹⁰⁴ When telecommunications officials or private sector players find themselves under pressure from KH or the ministry, they often turn to AAH for “protection.”¹⁰⁵ From a U.S. government perspective, this may be no better—swapping one designated group for another, jumping from the proverbial frying pan into the fire, in the author's view.¹⁰⁶

Intelligence analysts can support future policymaker demand by paying close attention to the personnel installed in key leadership positions in Iraq's telecoms sector in the future. After the November 11, 2025, parliamentary elections, which resulted in no clear winner,¹⁰⁷ there probably will be months of jockeying for position in the next cabinet formation.¹⁰⁸ Analysts should pay close attention to the identity of the next Minister of Communications, which has arguably changed from being a second-tier role in the cabinet to a much sought-after position as the security and commercial value of data is recognized.^{ar} Likewise, the appointment of non-technocrats to leadership of ministry subsidiaries is important to watch. Analysts should notate changes to leadership in the National

am A document in the author's possession lists the intended fees due to come to Vodafone and demonstrates the limit of their alleged role in the intended deal: €30 million for administration; €10 million and 3% of revenue (whichever larger) for brand use; €2.5 million every six months for travel and security for expatriate consultants; €13 million annually for app use; 3.5% of the value of all “purchase orders” immediately paid to Vodafone; and €75 million and 3.5% of all procurement, paid annually to Vodafone. This appears to be the same information partially cited by Iraqi journalist Qusay Shafiq in “Judicial freeze.” Shafiq is paraphrased thus: “According to these materials, the contract would have required Iraq to pay €30.3 million annually in management fees, €2.5 million every six months for travel and protection expenses, €10 million per year (or 3 percent of revenues) for brand use, and €13 million in platform and service fees.”

an The Iraqi judiciary allegedly received multiple direct entreaties by U.K. and U.S. diplomats, as well as by a business associate of Falah al-Fayyadh, to shortcut security reviews and process the 5G contract in October 2025, before the Sudanese government expired on November 11, 2025. These entreaties were rebutted. Author interviews, multiple Iraqi telecoms-focused and government contacts, 2025; exact dates, names, and places withheld at request of the interviewees.

ao As more public scrutiny has focused on the deal, in the run-up to Iraqi elections, the enthusiasm of foreign investors in the deal has waned. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.

ap The author inquired after Hossein Abdal-Zahra al-Azzawi within his own dataset and those of other Iraq-focused investigators, which include current Iraqi corporate databases. Al-Azzawi is a very well-documented figure, an Iraqi national who serves as an accountant for several militia-linked firms in Iraq. These firms have done business directly and indirectly with Iran-backed front companies exposed by mass email leaks, notably Sahara Thunder and Sepehr Energy Jahan Nama Pars. For background on these sanctioned entities, see “Treasury Targets Networks Facilitating Illicit Trade and UAV Transfers on Behalf of Iranian Military,” U.S. Department of the Treasury, April 25, 2024.

aq Ghazzi Faisal Fahad al-Fayyadh is shown in Iraqi corporate records to be the main shareholder in Atlas Information Systems. See author's own dataset and those of other Iraq-focused investigators, which include current Iraqi corporate databases.

ar In the author's view, which is shared by most of the experts canvassed for this article, the shift toward the Minister of Communications being a sought-after role has only manifested in the 2022-2025 term of government. The contracts being discussed in this article have demonstrated the potential commercial and security importance of the role to all the CF militias.

Mobile Telecommunications Company, the Informatics and Telecommunications Public Company (ITPC), the Al-Salam State Company, the State Company for Internet Services (SCIS),^{as} and any other new subsidiaries spun off by the ministry in restructuring.¹⁰⁹

The leadership of the Communications and Media Commission should also be closely watched and profiled.¹¹⁰ If and when Iraq develops a specialized digital regulator, that role should be scrutinized, especially to ensure that an Iran-style Supreme Committee on Cyberspace does not emerge without U.S. policymakers having an opportunity to signal concern and guide Iraq away from that outcome.¹¹¹ Likewise, U.S. policymakers need to be aware of pressures being brought on the checks and balances within Iraq's system—the judiciary, the Iraqi National Intelligence Service, parliamentary committees, and commercial ISPs like Earthlink and Scopesky.¹¹² Public-private partnerships with reputable non-militia companies are an important source of transparency within the sector, so attention should be focused on preventing enforced buy-outs of private telecoms operators and ISPs. Any non-competed contract awards in the Iraqi telecommunications sector need to be viewed with special care.

Most important, the rising role of the Muhandis General Company and other PMF spin-offs needs to be closely monitored.¹¹³ MGC is now a U.S.-sanctioned entity, with one agricultural subsidiary (Baladna) also designated.¹¹⁴ Other MGC subsidiaries and commercial partners need to be identified and sanctioned, perhaps beginning in the telecommunications sector. The Ministry of Communications bears close watching as a pass-through for Western technology being sent on to the PMF in violation to end-user monitoring commitments.

Outside of MGC, Falah al-Fayyadh's family networks—involving relatives and in-laws—should be a priority focus due to their apparent specialization in telecommunications and data projects. There is a dense web of shared connections between Atlas and Enkidu and a company called Supercell Internet Services LLC (Mahwar al-Kimma in Arabic).¹¹⁵ These include common use of the accountant Hossein Abdal Zahra al-Azzawi and use across multiple companies in the group of a legal advisor called Ali Mohammed Abdal-Sada.¹¹⁶ The group has been favored in digitalization contracts for a number of government agencies (trade, municipalities, and

the Baghdad local government).¹¹⁷ In the view of Iraqi businessmen, MPs, and intelligence professionals canvassed by the author, the Supercell, Enkidu, and Atlas companies are a group under the effective control and beneficial ownership of Ghazzi Faisal Fahad al-Fayyadh, the brother of Falah al-Fayyadh.¹¹⁸ This hypothesis is worthy of further testing by government intelligence analysts. Also providing a nexus to sanctionable activities, Ghazzi Faisal Fahad al-Fayyadh's son Ali is a major shareholder in the now-sanctioned Baladna,^{at} a subsidiary of MGC that was specifically designated by the U.S. Treasury.¹¹⁹

The ties between Iraqi networks (MGC and Falah al-Fayyadh) and Chinese companies such as Huawei should be the subject of closer scrutiny, with special regard to PMF and Iraqi Prime Minister's Office data centers and internal communications systems.^{au} Likewise, focus should be directed toward understanding the commercial tie-ups between the very active Iranian embassy economic section and various Chinese and Russian equipment providers seeking inroads in the Iraqi telecoms sector.^{av} It should be assumed that Iran-backed factions in Iraq—and numerous other actors—already have access to Deep Packet Inspection capabilities, which Freedom House reported in its 2024 country update, citing an anonymous source within an Iraqi telecommunications company.^{aw} U.S. interactions and intelligence-sharing with the Iraqi government and security sector have arguably never been less technically secure than they are at present, but the situation can always get worse. **CTC**

at Ali Ghazzi al-Fayyadh is shown in Iraqi corporate records to be the main shareholder in Baladna. See author's own dataset and those of other Iraq-focused investigators, which include current Iraqi corporate databases.

au The use of Huawei technology in the PMF and Prime Minister's Office is an open secret in Iraq's government circles. Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence contacts, 2025; exact dates, names, and places withheld at request of the interviewees.

av One area of recurring interest in conversations undertaken by the author is the Iranian embassy in Baghdad's role in teeing up business, with a cut of the proceeds, for Chinese firms in Iraq's oil, transport, and telecoms sectors. This is worth a separate study.

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- 78 For a recounting of the M1 Abrams saga, see Knights, Malik, and Al-Tamimi.
- 79 An electronic copy of this leaked letter, including its signature block, is in the author's possession and has been evaluated as genuine by multiple experts in the Iraqi cabinet and ministry procedures.
- 80 An electronic copy of this leaked letter, including its signature block, is in the author's possession and has been evaluated as genuine by multiple experts in the Iraqi cabinet and ministry procedures.
- 81 An electronic copy of this leaked letter, including its signature block, is in the author's possession and has been evaluated as genuine by multiple experts in the Iraqi cabinet and ministry procedures.
- 82 Ibid.
- 83 This is the author's assessment based on all the available evidence and the author's analytic processes.
- 84 Sam Fenwick, "Iraq: Mobile Network Experience Report," Open Signal, January 2025.
- 85 This is the author's assessment based on all the available evidence and the author's analytic processes.
- 86 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 87 For one example (in English), see Dana Taib Menmy, "Behind closed doors?: Iraq's Vodafone 5G deal raises concerns on transparency," New Arab, November 29, 2024. There are many other Arabic equivalents, including social media comments by Iraqi politicians.
- 88 "Judicial freeze: Iraq's new national 5G carrier on hold," Shafaq News, October 13, 2025.
- 89 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 90 Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
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- 92 "Judicial freeze."
- 93 Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence community contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
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- 95 Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence community contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 96 Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 97 Author interviews, multiple Iraqi telecoms-focused and government contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 98 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 99 Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 100 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 101 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 102 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 103 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on a broad-based list of episodes when CF militias acted competitively, not collaboratively. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 104 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 105 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence contacts, 2025; exact dates, names, and places withheld at request of the interviewees.
- 106 This is the author's assessment based on all the available evidence and the author's analytic processes.
- 107 Jared Malsin and Saleh al-Battati, "Iraq Election Results Set Stage for a Long Power Struggle," *Wall Street Journal*, November 13, 2025.
- 108 This is the author's assessment based on all the available evidence and the author's analytic processes, in particular his close experience of monitoring the prior six elections since 2005.
- 109 This is the author's assessment based on all the available evidence and the author's analytic processes.
- 110 This is the author's assessment based on all the available evidence and the author's analytic processes.
- 111 This is the author's assessment based on all the available evidence and the author's analytic processes.
- 112 This is the author's assessment based on all the available evidence and the author's analytic processes.
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- 115 This is the author's assessment based on all the available evidence and the author's analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author

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116 Author interviews, multiple Iraqi telecoms-focused and Iraqi intelligence contacts, 2025; exact dates, names, and places withheld at request of the interviewees. The author used his own dataset and those of other Iraq-focused investigators, which include current Iraqi corporate databases.

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- 118 This is the author’s assessment based on all the available evidence and the author’s analytic processes. The assessment is based, in part, on the consensus finding of multiple Iraqi telecoms-focused contacts. Author interviews, multiple Iraqi telecoms-focused contacts, 2025; exact dates, names, and places withheld at request of the interviewees.

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