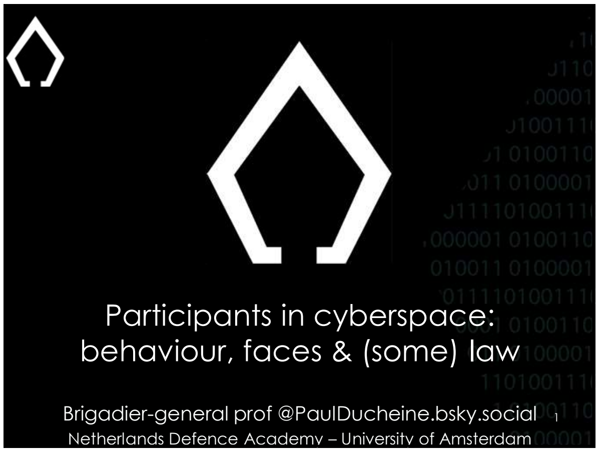
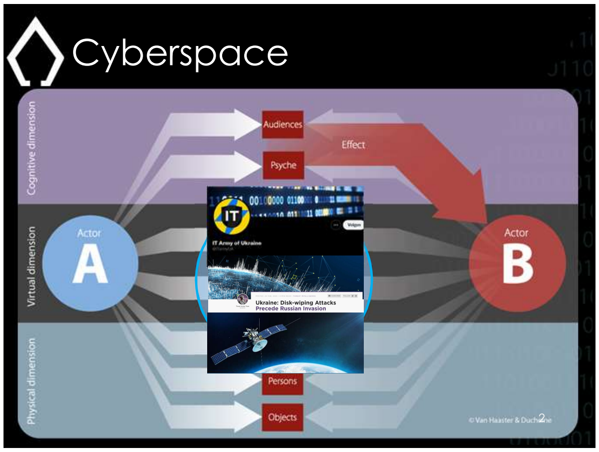


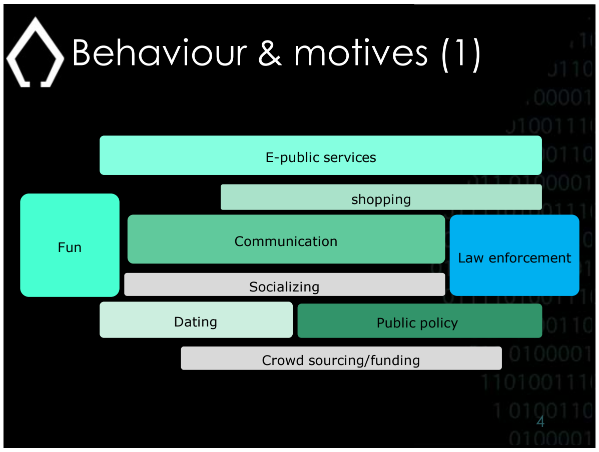
Participants in cyberspace: behaviour, faces & (some) law

Brigadier-general prof @PaulDucheine.bsky.social

Netherlands Defence Academy – University of Amsterdam



Cyberspace



Behaviour & motives (1)

E-public services

shopping

Fun

Communication

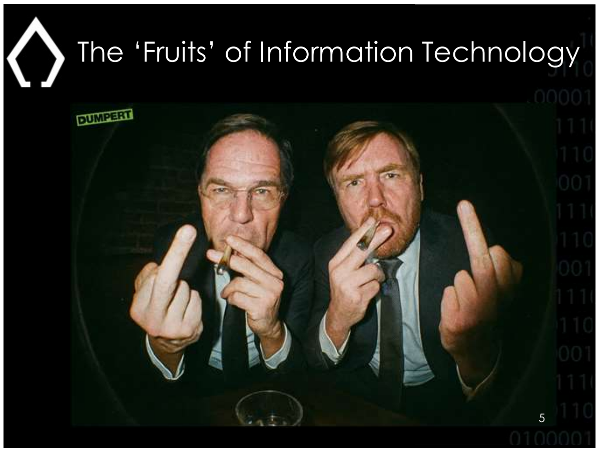
Law enforcement

Socializing

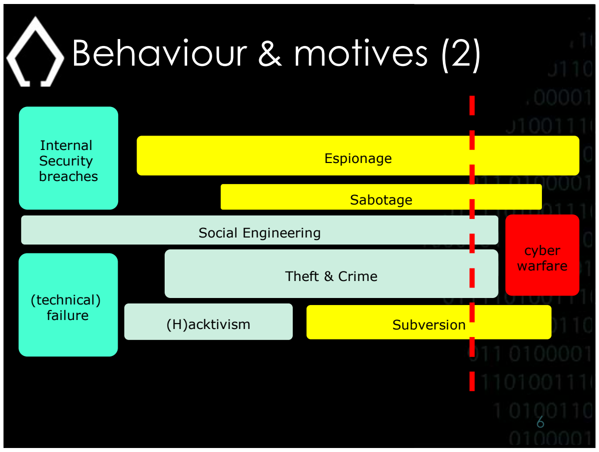
Dating

Public policy

Crowd sourcing/funding



The ‘Fruits’ of Information Technology



Behaviour & motives (2)

Internal Security breaches

Espionage

Sabotage

Social Engineering

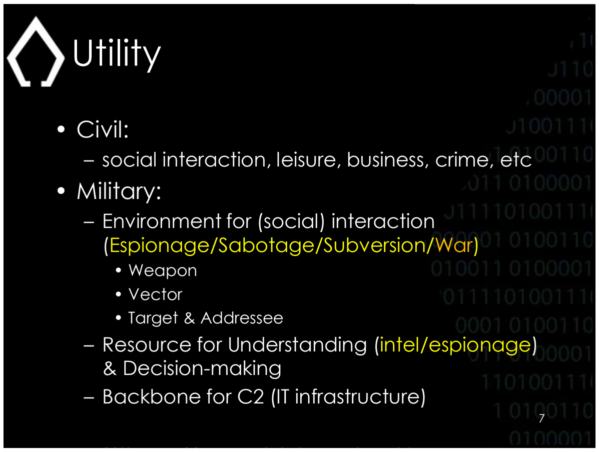
cyber warfare

(technical) failure

Theft & Crime

(H)acktivism

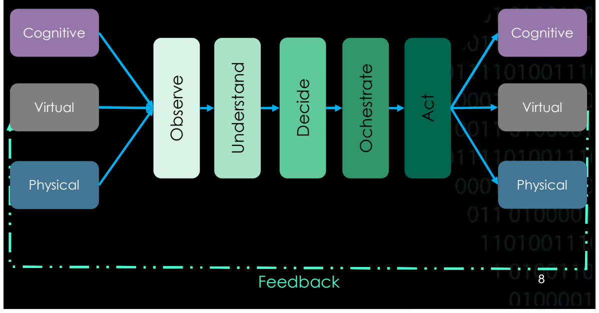
Subversion



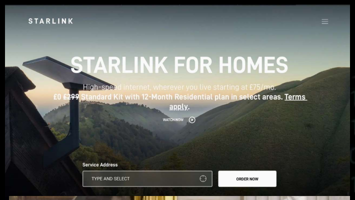
Utility

- Civil:
  - social interaction, leisure, business, crime, etc
- Military:
  - Environment for (social) interaction (Espionage/Sabotage/Subversion/War)
    - Weapon
    - Vector
    - Target & Addressee
  - Resource for Understanding (intel/espionage) & Decision-making
  - Backbone for C2 (IT infrastructure)

Utility steps: (OUDOA)^n



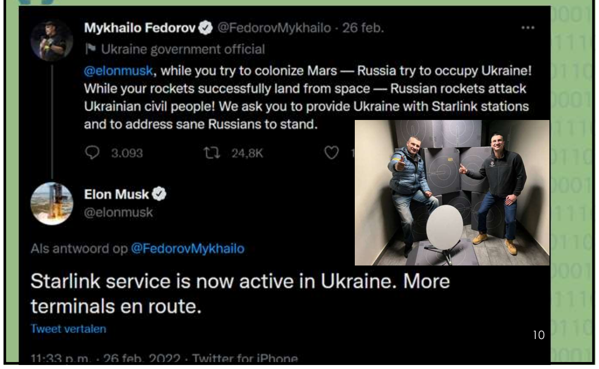
C2 backbone & IT infra/services


STARLINK

STARLINK FOR HOMES

High-speed internet, wherever you live starting at £75/mo.
£0 ~~£299~~ Standard Kit with 12-Month Residential plan in select areas. Terms apply.

Cyberspace ≡ IT services


Mykhailo Fedorov @FedorovMykhailo · 26 feb.
Ukraine government official

@elonmusk, while you try to colonize Mars — Russia try to occupy Ukraine! While your rockets successfully land from space — Russian rockets attack Ukrainian civil people! We ask you to provide Ukraine with Starlink stations and to address sane Russians to stand.

Elon Musk
@elonmusk

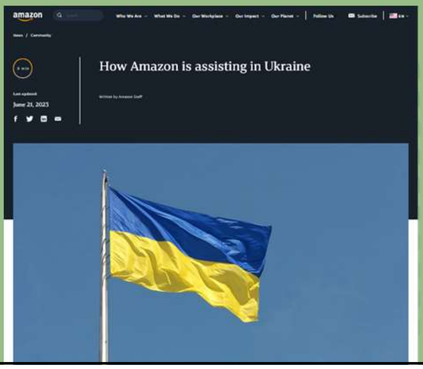
Als antwoord op @FedorovMykhailo

Starlink service is now active in Ukraine. More terminals en route.

Tweet vertalen

11:33 p.m. · 26 feb. 2022 · Twitter for iPhone

Cyberspace ≡ IT services

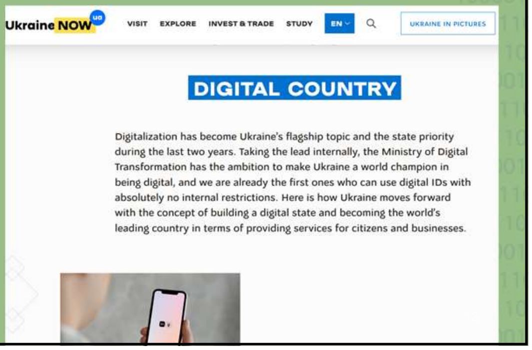


How Amazon is assisting in Ukraine

June 21, 2023

Diia

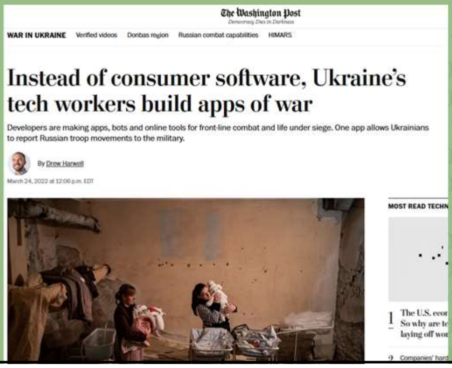
https://ukraine.ua/invest-trade/digitalization/



DIGITAL COUNTRY

Digitalization has become Ukraine's flagship topic and the state priority during the last two years. Taking the lead internally, the Ministry of Digital Transformation has the ambition to make Ukraine a world champion in being digital, and we are already the first ones who can use digital IDs with absolutely no internal restrictions. Here is how Ukraine moves forward with the concept of building a digital state and becoming the world's leading country in terms of providing services for citizens and businesses.

App developer: Diia


The Washington Post
Democracy Dies in Darkness

Instead of consumer software, Ukraine's tech workers build apps of war

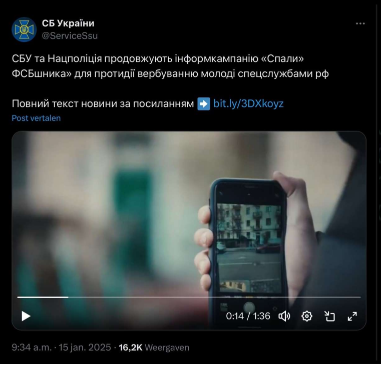
Developers are making apps, bots and online tools for front-line combat and life under siege. One app allows Ukrainians to report Russian troop movements to the military.

By Drew Harwell

March 24, 2022 at 12:06 p.m. EDT

Observe > understand > decide

https://x.com/ServiceSsu/status/1879447083226419333



СБ України
@ServiceSsu

СБУ та Нацполіція продовжують інформкампанію «Спали» ФСБшника» для протидії вербуванню молоді спецслужбами рф

Повний текст новини за посиланням ➡️ bit.ly/3DXkoyz

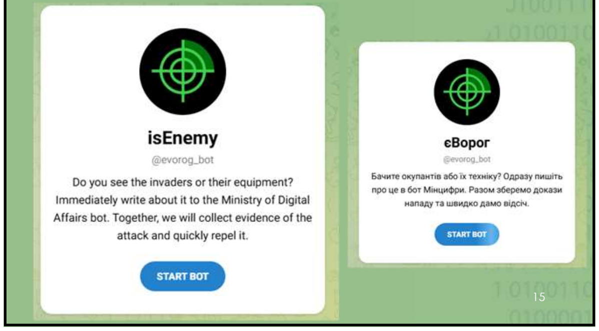
Post vertalen

0:14 / 1:36

9:34 a.m. · 15 jan. 2025 · 16,2K Weergaven

14

Reporting E-Vorog (integrated in DIIA app: 20M users)



isEnemy
@evorog_bot

Do you see the invaders or their equipment? Immediately write about it to the Ministry of Digital Affairs bot. Together, we will collect evidence of the attack and quickly repel it.

START BOT

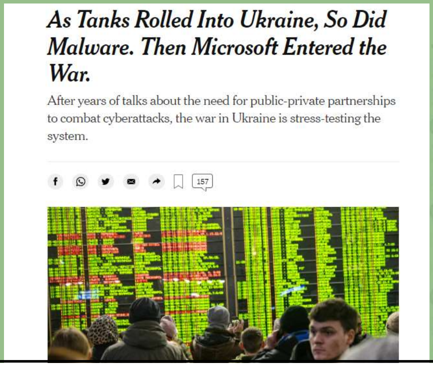
єВорог
@evorog_bot

Бачите окупантів або їх техніку? Одразу пишіть про це в бот Мінцифри. Разом зберемо докази нападу та швидко дамо відсіч.

START BOT

15

Cyber Threat Intell (CTI) etc

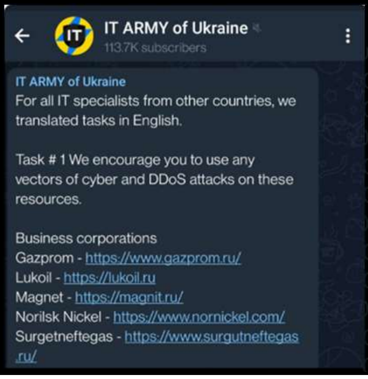


As Tanks Rolled Into Ukraine, So Did Malware. Then Microsoft Entered the War.

After years of talks about the need for public-private partnerships to combat cyberattacks, the war in Ukraine is stress-testing the system.

16

Act



IT ARMY of Ukraine
113.7K subscribers

IT ARMY of Ukraine
For all IT specialists from other countries, we translated tasks in English.

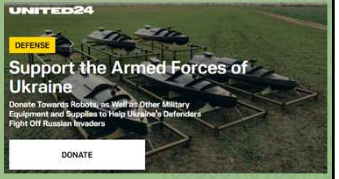
Task # 1 We encourage you to use any vectors of cyber and DDoS attacks on these resources.

Business corporations
Gazprom - https://www.gazprom.ru/
Lukoil - https://lukoil.ru
Magnet - https://magnit.ru/
Norilsk Nickel - https://www.nornickel.com/
Surgetneftegas - https://www.surgutneftegas.ru/

18

Marketing, crowdfunding,‘dronations’

- United24: Gvmt platform, crowdfunding, ‘war marketing’
- SaintJavalin.com



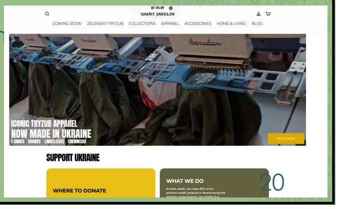
UNITED24

DEFENSE

Support the Armed Forces of Ukraine

Donate Towards Robots, as Well as Other Military Equipment and Supplies to Help Ukraine's Defenders Fight Off Russian Invaders

DONATE



SUPPORT UKRAINE

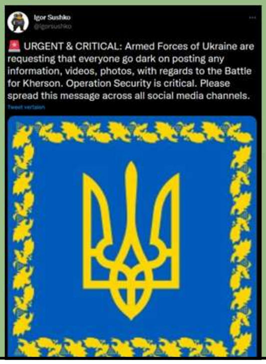
WHERE TO DONATE

WHAT WE DO

At Saint Javelin, we create 95% of our premium-quality products in Ukraine during the ongoing russian invasion. Our mission is to

20

-participation: going dark



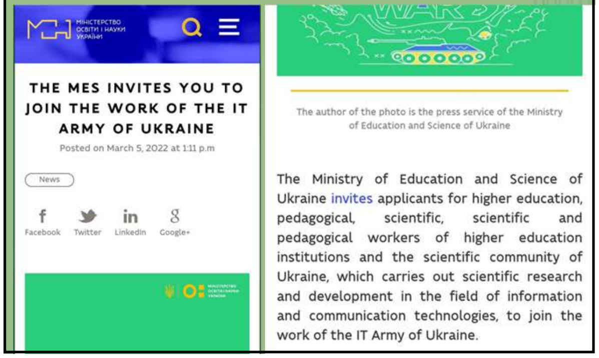
Igor Sushko
@igorsushko

🚨 URGENT & CRITICAL: Armed Forces of Ukraine are requesting that everyone go dark on posting any information, videos, photos, with regards to the Battle for Kherson. Operation Security is critical. Please spread this message across all social media channels.

Tweet vertalen

21

+participation invitation



МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

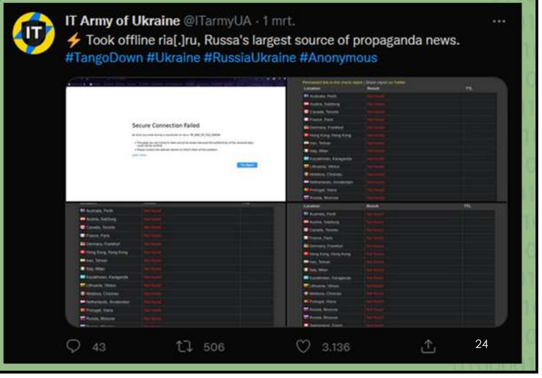
THE MES INVITES YOU TO JOIN THE WORK OF THE IT ARMY OF UKRAINE

Posted on March 5, 2022 at 1:11 p.m

The author of the photo is the press service of the Ministry of Education and Science of Ukraine

The Ministry of Education and Science of Ukraine invites applicants for higher education, pedagogical, scientific, scientific and pedagogical workers of higher education institutions and the scientific community of Ukraine, which carries out scientific research and development in the field of information and communication technologies, to join the work of the IT Army of Ukraine.

Hacks



IT Army of Ukraine @ITarmyUA · 1 mrt.

⚡ Took offline ria[.]ru, Russa's largest source of propaganda news. #TangoDown #Ukraine #RussiaUkraine #Anonymous

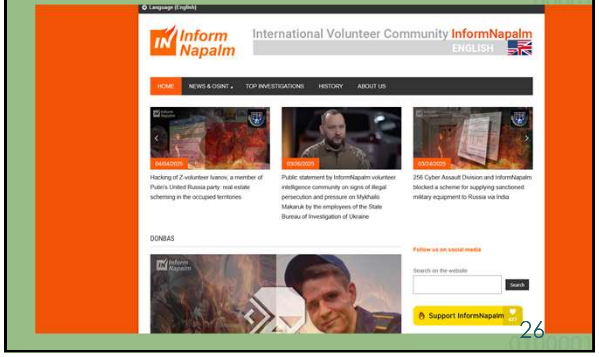
24

Ecosystem

- Cyber Resistance (civilian hackers) i.a. IT-Army
- InformNapalm:
  - civilian, analytic collective, enrich hacked information
  - publish on websites & social media;
  - amplification
- State-linked: cooperation with SBU & HUR.
  - First, information is shared
  - when no more operational value: published on channels of Inform Napalm
- https://www.lawfaremedia.org/article/kyber-sprotyv-ukraine-s-spec-ops-in-cyberspace

25

InformNapalm.org/en



Language (English)

Inform Napalm — International Volunteer Community InformNapalm ENGLISH

04/04/2025 Hacking of Z-volunteer Ivanov, a member of Putin's United Russia party: real estate scheming in the occupied territories

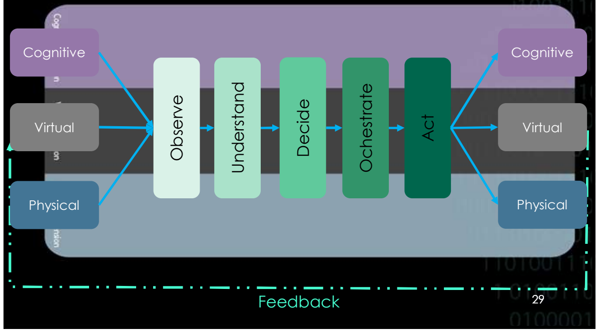
03/26/2025 Public statement by InformNapalm volunteer intelligence community on signs of illegal persecution and pressure on Mykhailo Makaruk by the employees of the State Bureau of Investigation of Ukraine

03/24/2025 256 Cyber Assault Division and InformNapalm blocked a scheme for supplying sanctioned military equipment to Russia via India

DONBAS

26

Behaviour, motives & law?



29

Law

- Private International Law
- Public International Law
  - Supranational law (i.a. EU)
  - Binding sanction regimes
  - IT-law
  - IHL/LOAC
- Domestic law
  - Constitutional law
  - Criminal law

30

58 AP1: Precautions against the effects of attacks

The Parties to the conflict shall, to the maximum extent feasible:

[…] (c)

- take the other necessary precautions
- to protect the civilian population, **individual civilians** and civilian objects under their control
- against the dangers resulting from military operations.

31

50 AP1: Civilian

"A civilian is any person who does not belong to one of the categories of persons referred to in Article 4(A)1-3, 6) GC3 and in Article 43 AP1. In case of doubt whether a person is a civilian, that person shall be considered to be a civilian."

33

43(2) AP1 & 4(A)1-3, 6 GC3: Combatants

- Members of the **armed forces of a party to the conflict** (other than medical personnel and chaplains covered by art. 33 GCIII) (Art. 4 A 1 and art. 43(2) API)
- Members of **militias or volunteer** corps forming **part o**f such armed forces (Art. 4 A 1))
- Members of **other militias and volunteer** corps, including those of organized resistance movements, belonging to a Party to the conflict and operating **in or outside their own territory,** even if this territory is occupied (Art. 4 A 2))
- Members of regular armed forces who profess allegiance to a government or an authority not recognized by the Detaining Power
- **Levee en masse**: Inhabitants of a non-occupied territory, who on the approach of the enemy spontaneously take up arms to resist the invading forces, without having had time to form themselves into regular armed units, provided they carry arms openly and respect the laws and customs of war.

34

DPH (ICRC IG)

- Threshold of harm
- Direct causal link between act and harm intended or inflicted
- Belligerent nexus

37

DPH in Cyberspace

Unambiguous:

- Conducting cyber attacks
- Actions to enable specific attacks i.a.
  - identifying vulnerabilities
  - Malware designing (based on vulnerabilities)
- CybInt gathering/cyber espionage
- DDoS operations

No DPH:

- Designing malware for Open Source (even when used for a cyber attack in an armed conflict)
- General IT maintenance

Ambiguous:

- Developing and providing malware to conduct an attack without knowing what the DESIG target

38

Civilians who DPH

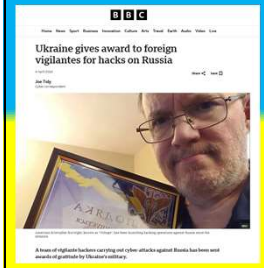
- Remain status of civilian
- By conduct => no protection "if and for such time" as DPH
- IAW IHL: no int'l law violation
- However: Domestic criminal law
  - 'hacking', espionage, sabotage, etc
- However: Enemy legislation & action

39

Hence

40

Recognition & reward



BBC

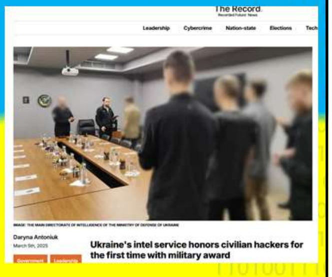
Home News Sport Business Innovation Culture Arts Travel Earth Audio Video Live

Ukraine gives award to foreign vigilantes for hacks on Russia

Share Save

Joe Tidy
Cyber correspondent

A team of vigilante hackers carrying out cyber-attacks against Russia has been sent awards of gratitude by Ukraine's military.



The Record.
Recorded Future News

Leadership Cybercrime Nation-state Elections Tech

IMAGE: THE MAIN DIRECTORATE OF INTELLIGENCE OF THE MINISTRY OF DEFENSE OF UKRAINE

Daryna Antoniuk
March 5th, 2025

Government Leadership

Ukraine's intel service honors civilian hackers for the first time with military award

41