

RSA® Conference 2019

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BETTER.

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CYBER INFLUENCE: CYBERWAR AND PSYCHOLOGICAL OPERATIONS

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@COLONEL_LARRY

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Agenda

- Instruments of Government Power
- Premise of the Presentation
- Military Strategy Fundamentals
- Cyberwar
- Psychological Operations (PSYOP)
- Cyber Influence
- Applying What We Have Learned

DIME: Instruments of Government Power

- Diplomatic
- Informational
- Military
- Economic

Source:

<https://www.cc.gatech.edu/~tpilsch/INTA4803TP/Articles/Elements%20of%20National%20Power.pdf>

Presentation Premise

Information is a critical and under used instrument of government power by the US and NATO.

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Military Strategy Fundamentals

Sun Tzu

“Hence to fight and conquer in all your battles is not supreme excellence; supreme excellence consists in breaking the enemy's resistance without fighting.

[http://classics.mit.edu/
Tzu/artwar.html”](http://classics.mit.edu/Tzu/artwar.html)



Carl von Clausewitz



War is the continuation of politics by other means.

(Carl von Clausewitz)

[izquotes.com](https://www.izquotes.com/quote/War_is_the_continuation_of_politics_by_other_means_Carl_von_Clausewitz)

Principles of War

- Objective
- Offensive
- Mass
- Economy of Force
- Maneuver
- Unity of Command
- Security
- Surprise
- Simplicity

Source: <https://history.army.mil/books/AMH/AMH-01.htm>

The Difference Between Traditional & Cyber War

Attribute	Traditional War	Cyber War
Protagonists	Nations	Non-state Actors, Groups, Individuals
Declared	Yes	No
Geographic Boundaries	Yes	No
Effects	Body Count, Property Damage, Land Occupied	Measureable or may be “flu” like
Personnel	Military Forces	Varies from self-trained to state sponsored
Equipment	Weapons	Internet Connection, COTS Hardware & COTS or easily obtained Software
Targets	Chiefly Military	Government & Private Sector

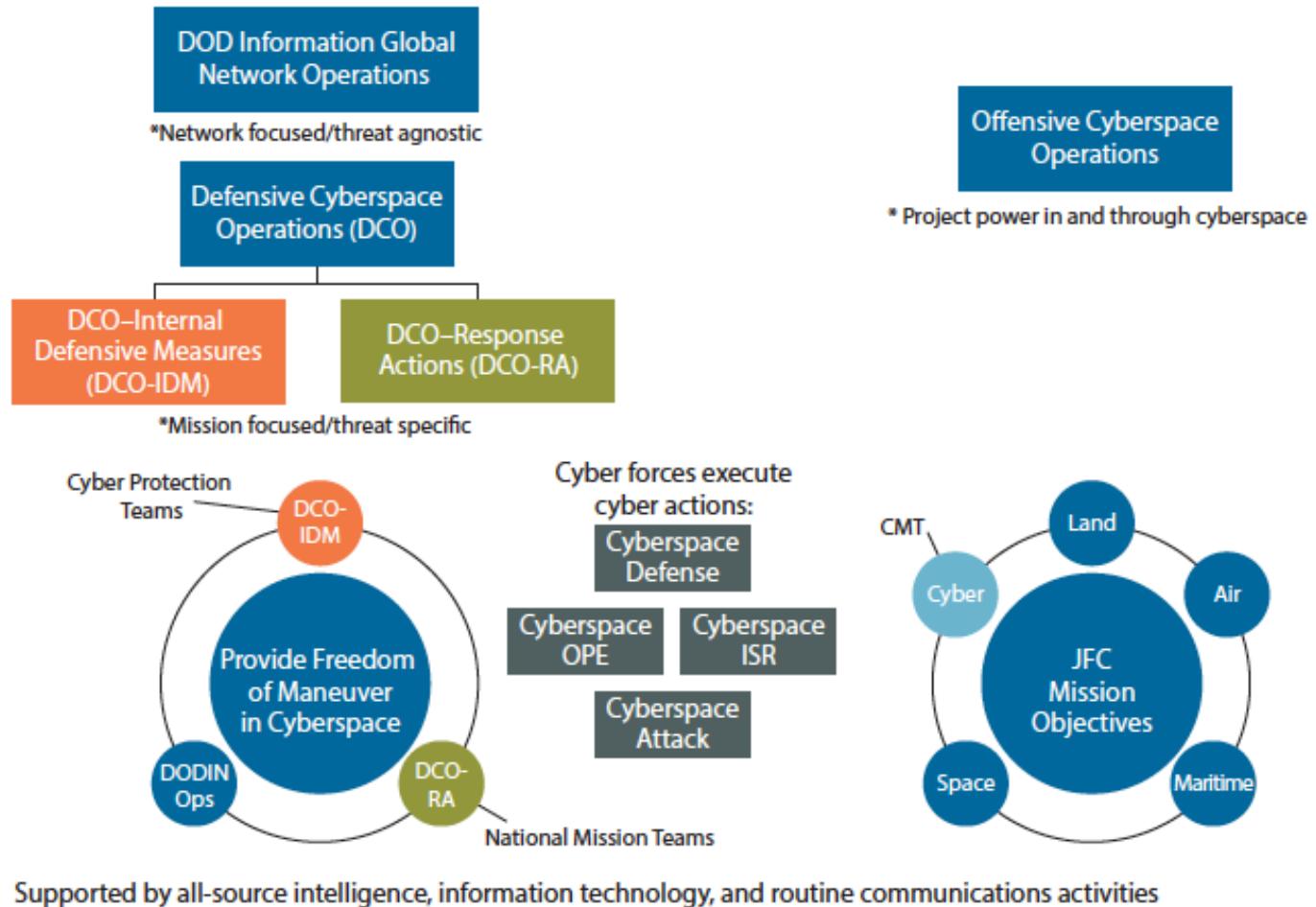
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Cyber War



Cyberspace Operations

Figure 1. Cyberspace Operations



Source:

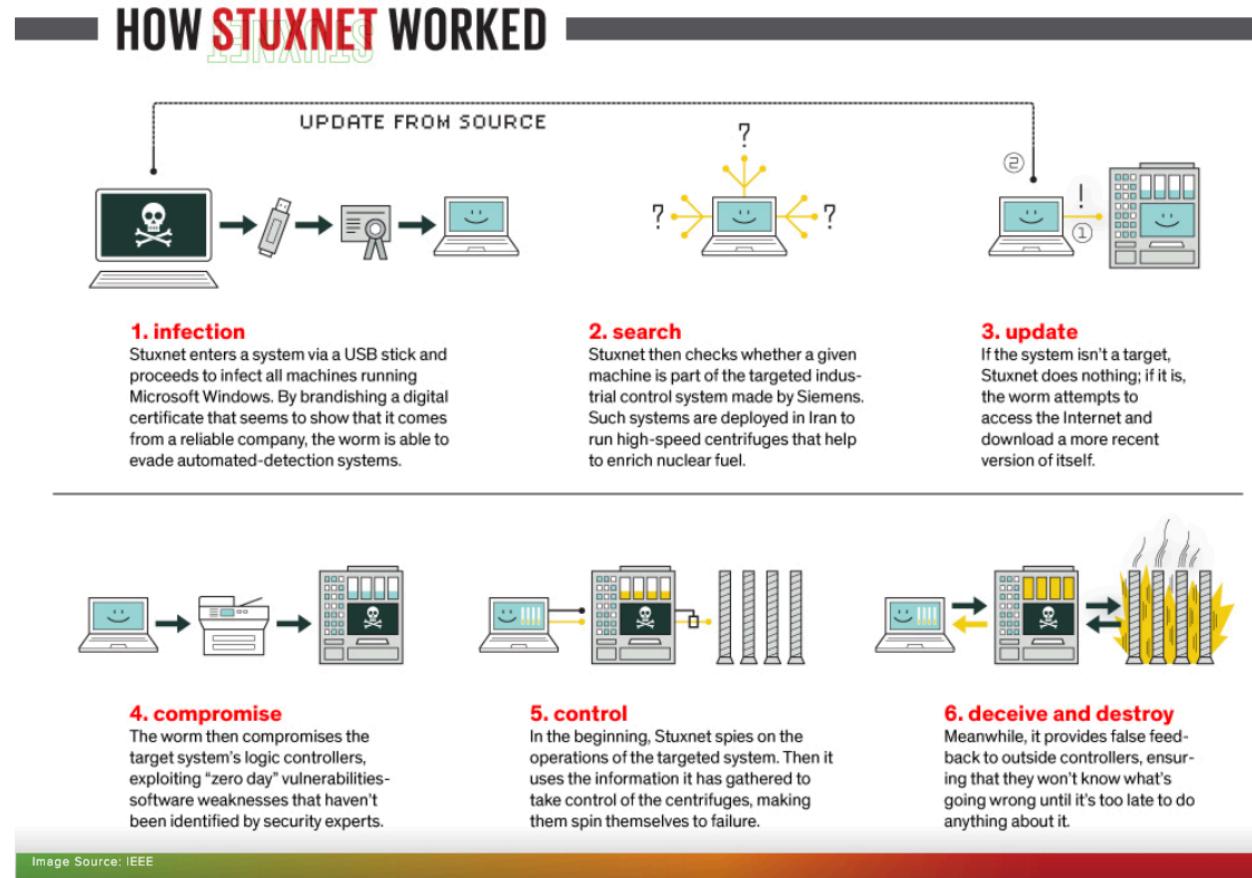
<https://ndupress.ndu.edu/Media/News/Article/577499/the-joint-force-commanders-guide-to-cyberspace-operations/>

Where's influence?

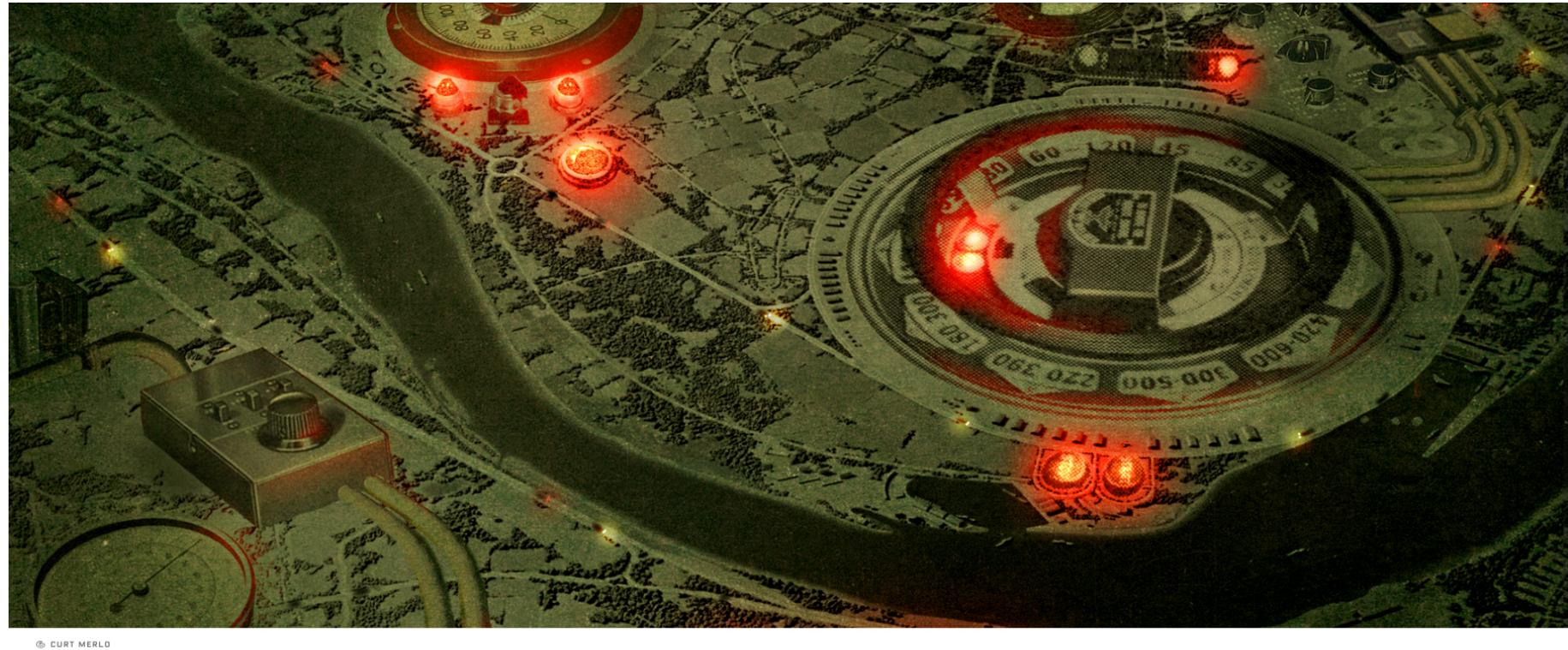
Cyberwar Skills are “Hard Skills”

- Malware management and development
- Network architecture
 - Configuration Expertise
- Vulnerability Assessment
- Information Assurance
- More??

Cyber War Example: Stuxnet



Cyber War Example: Ukraine



ANDY GREENBERG SECURITY 06.20.17 06:00 AM
HOW AN ENTIRE NATION BECAME RUSSIA'S TEST LAB FOR CYBERWAR

Source: <https://www.wired.com/story/russian-hackers-attack-ukraine/>

Cyberwar Example: Marriott Breach and the PRC

Opinions

The Marriott data breach exposes a wider, potentially more nefarious cyberthreat



A Marriott hotel in Chicago on Nov. 30. (Daniel Acker/Bloomberg News)

By **Jesse Varsalone**
December 11

Source: <https://wapo.st/2EAsrRJ>

Polling Question #1

- When you are interested in learning what is happening in the news, where do you go?
 - Traditional Media
 - Websites
 - Social Media
- <https://rsa1-live.eventbase.com/polls?event=rsa2019&polls=3842>

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PSYOP



The PSYOP Mission

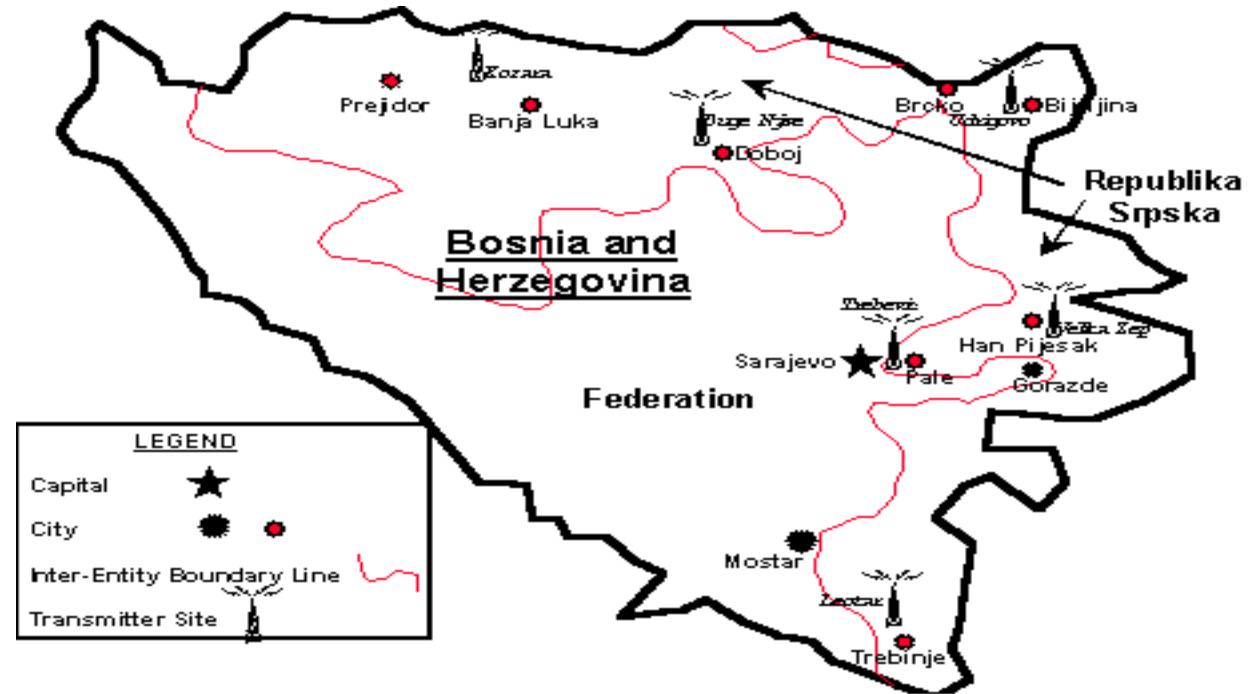
The mission of PSYOP is to influence the behavior of foreign target audiences (TAs) to support U.S. national objectives. PSYOP accomplish this by conveying selected information and/or advising on actions that influence the emotions, motives, objective reasoning, and ultimately the behavior of foreign audiences.

Source: FM 3-05.30 MCRP 3-40.6 Psychological Operations

PSYOP Skills are “Soft Skills”

- Human Psychology
- Sales & Marketing TTP
- Media Fundamentals
- Cultural & Linguistic Skills
- More??

TV PSYOP: Bosnia



Fallujah, Iraq

Soldiers, Marines rely on PSYOP, learning a city's rhythm when training for urban warfare

By: Todd South March 6



Infantry assigned to 2nd Battalion, 35th Infantry Regiment, 3rd Brigade Combat Team, 25th Infantry Division, stand ready to fire their M240L machine gun. The machine gun crew provided support during squad room-clearing procedures at the Military Operations in Urban Terrain site at Schofield Barracks, Hawaii. (Staff Sgt. Armando Limon/Army)

While much attention is spent on adjusting weapons systems and training soldiers and Marines to use them, what may be of more value in an urban fight is the work being done years before a conflict erupts.

Experts frequently tout the success of psychological operations units in the run up to the second battle of Fallujah in late 2004. They worked to inform the city's residents that the battle would soon unfold and warned them to evacuate.

As a result, an estimated 90 percent of the population fled, freeing up Marines to fight with fewer constraints than if there was a substantial number of civilians present.

Source: https://www.militarytimes.com/news/your-army/2018/03/06/soldiers-marines-rely-on-psyop-learning-a-citys-rhythm-when-training-for-urban-warfare/?utm_source=clavis

Uganda

How US Special Operators Helped Take Down Joseph Kony's Army With Tailored Messages



AA FONT SIZE +

PRINT

AP / STUART PRICE ▾

Source: <https://www.defenseone.com/technology/2017/10/how-4-green-berets-took-down-joseph-konys-army-tailored-messages/141851/>

Polling Question #2

- Which of these sources do you feel is the most trusted?
 - Traditional Media
 - Social Media
 - Friend or Colleague
- <https://rsa1-live.eventbase.com/polls?event=rsa2019&polls=3843>

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Cyber Influence



Examples of Cyber Influence

Target	Desired Effect	Possible Tactics
Head of State	Convince population leader has lost control.	Deface website with messages from the opposition, DDOS on government services
Head of State	Imply immoral acts	Post photos on Twitter & FaceBook
Military Unit	Sow confusion	Covert bots to alter data & interfere with normal IT operation
Hostile Government	Influence mid-level managers to support opposition.	Text messages to mobile + e-mail

Foreign Cyber Influence #1 – China & The Heartland

PSYOP Regimental Blog

Authoritative source of information on Psychological Operations (PSYOP) or as it is now called Military Information Support Operations (MISO). Written by a retired senior Army Officer and former Honorary Colonel of the PSYOP Regiment.

Thursday, November 15, 2018

Main Street USA: Latest Chinese Propaganda Target

On October 20, 2018 Yahoo Finance ran an online article “China broadens its propaganda drive to heartland



America” (see: <https://yhoo.it/2qNJ8jP>, which is also a photo source). The article noted how the Chinese publication ChinaWatch (which you can see on line at: www.chinadaily.com.cn/) ran a series of articles targeted at US soybean farmers.

Blog Archive

- ▼ [2018](#) (25)
 - [December](#) (1)
 - ▼ [November](#) (2)
 - [If NATO cyberspace policy violates many of the pri...](#)
 - [Main Street USA: Latest Chinese Propaganda Target](#)
- [October](#) (2)
- [September](#) (2)
- [August](#) (3)
- [July](#) (1)

Source: <https://psyopregiment.blogspot.com>

Cyber Influence #2 - Russia



Russia's President Vladimir Putin.

Britain accused **Russian** military intelligence on Thursday of directing a host of cyber attacks aimed at undermining Western democracies by sowing confusion in everything from sport to transport and the 2016 U.S. presidential election.

Source: <https://www.cnbc.com/2018/10/04/britain-says-russian-military-intelligence-behind-host-of-global-cyber-attacks.html>

US Global Influence Efforts Are Duds – Voice of America



Secretary Clinton Testifies: BBG is Defunct

Source: <https://www.youtube.com/watch?v=pei83ZbIPI8&feature=youtu.be>

Deep Fakes

Google camera search

All Videos News **Images** Shopping More Settings Tools Collections SafeSearch ▾

gal gadot fakeapp gif obama trump artificial intelligence fake news wsj reddit face komando daisy ridley

Reference Our Result

Deepfake Videos Are Getting Impossibly Good
gizmodo.com

Deepfake Videos Are Getting Scary Good ...
electronics.howstuffworks.com

real fake" video of Barack Obama ...
youtube.com

DeepFakes Video Collections Part 2 ...
youtube.com

Reference Our Result

It's Getting Harder to Spot a Deep Fake ...
youtube.com

PART 1 DEEP FAKES Good or Bad??
youtube.com

How to Spot a "Deep Fake" Face-Swapped ...
howtogeek.com

Forget DeepFakes, Deep Video Portraits ...
techcrunch.com

What are 'deepfakes?' - YouTube
youtube.com

1920 x 1080

Deepfake Videos Are Getting Real and ...
wsj.com

FakeApp: Finally, a Program that Will ...
reason.com

Exploring DeepFakes – Hacker Noon
hackernoon.com

Deep Video Portraits

Source Sequence Reenactment

Cyber Media Jamming

Electromagnetic jamming is the deliberate radiation, reradiation, or reflection of electromagnetic energy for the purpose of preventing or reducing an enemy's effective use of the electromagnetic spectrum, and with the intent of degrading or neutralizing the enemy's combat capability (see: <https://fas.org/irp/doddir/dod/jp3-13-1.pdf>).



The screenshot shows a news article from ZDNet. At the top, there's a banner for Comcast's 'Beyond Fast' network. Below the banner, the ZDNet logo and search bar are visible. The main headline reads: "Ransomware suspected in cyberattack that crippled major US newspapers". A sub-headline states: "Source inside Tribune Publishing says printing outage caused by Ryuk ransomware infection." Below the headline is a photo of several stacks of newspapers. To the right of the photo, there's a sidebar with a "Watson" AI advertisement and links to more articles by Catalin Cimpanu.

Source: <https://zd.net/2R7uSx1>

Polling Question #3

- When you see something that don't think is quite right, do you:
 - Use multiple sources
 - Monitor social media
 - Seek offline confirmation
- <https://rsa1-live.eventbase.com/polls?event=rsa2019&polls=3844>

Why are US Cyber Influence Operations Ineffective?

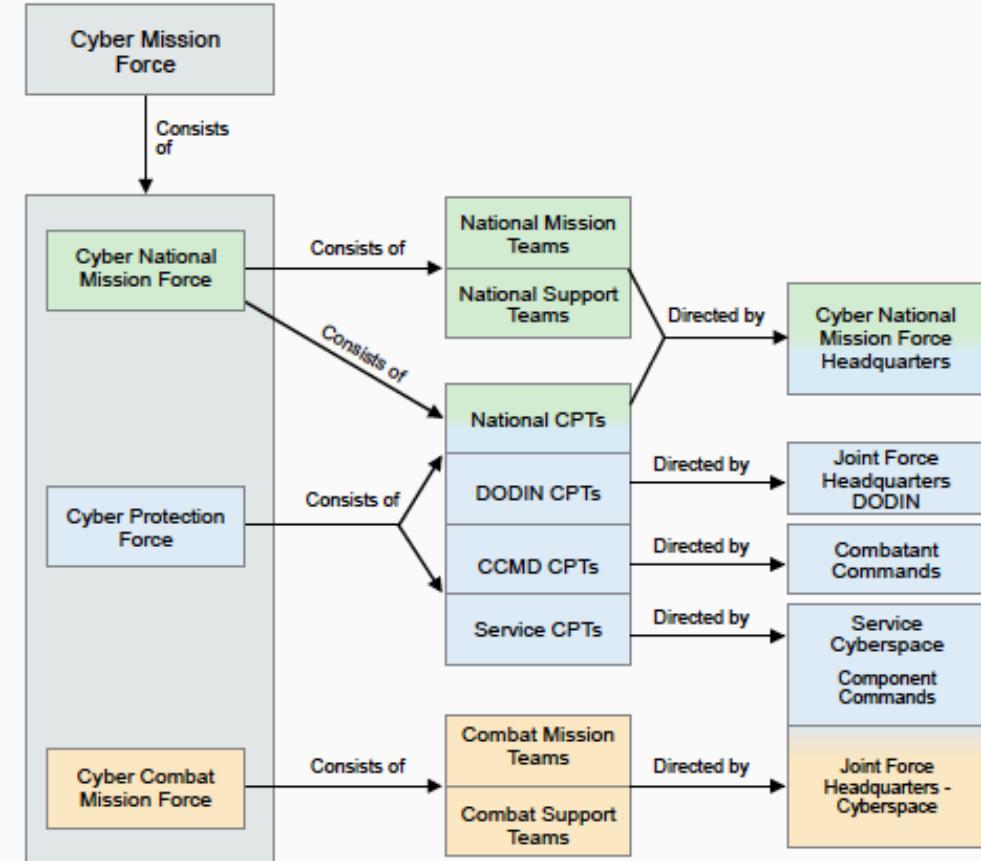
- Information is an unappreciated and underused instrument of government power.
- Department of State Public Diplomacy has been eviscerated.
- Cyber Command would rather shoot ‘electrons’ than ideas’.
- Influence is not represented at the targeting table.

DOD Cyber Mission Force Relationships

Where's influence?

Source: JP 3-12 Cyberspace Operations

Department of Defense Cyber Mission Force Relationships

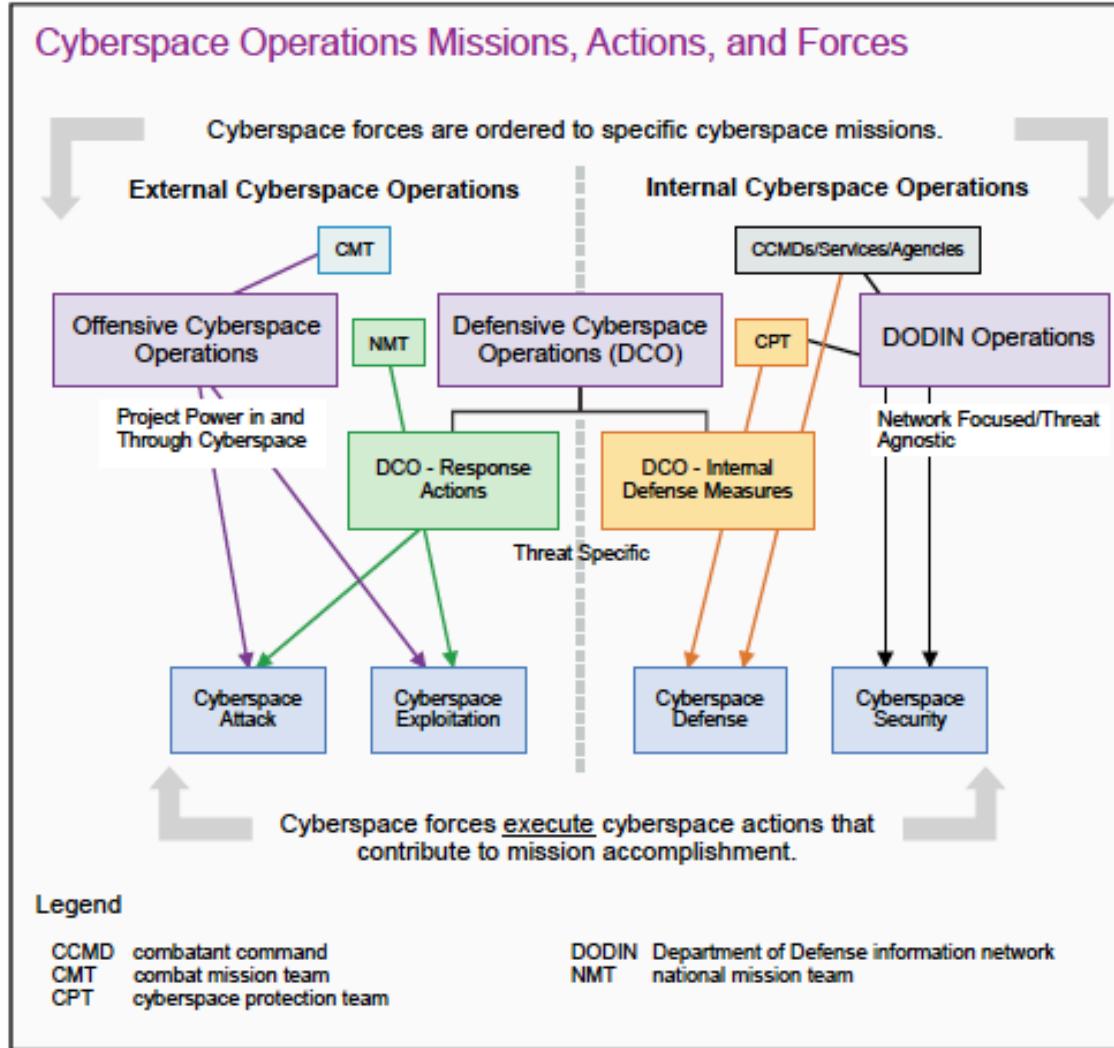


Legend

CCMD combatant command
CPT cyberspace protection team

DODIN Department of Defense information network

Cyberspace Operations, Missions, Actions, Forces



Where's influence?
Source: JP 3-12 Cyberspace Operations

DOD Organizations

Cyber Focused

- NSA
- Cyber Command
 - Service Cyber Commands

Influence Focused

- US Special Operations Command
 - Global Engagement Center
 - Active Service PSYOP Organizations
 - US Army Cyber Command
 - US Navy Cyber Forces
 - Marine Corps Cyberspace Command
 - 24th Air Force
- Army Reserve
 - 2 Army PSYOP Groups

Applying What We Have Learned

- Next week you should:
 - Identify teams that should combine technical and soft skills.
- In the first three months following this presentation you should:
 - Review your Information Security Awareness campaign to insure that you have combined electronic and other media
 - Assess your professional development programs to determine how to best cross fertilize technical and soft skills
- Within six months you should:
 - Review marketing campaign plans to balance electronic and non-electronic marketing

Thank You!

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