

ECSL

European Centre for Space Law



Cyber Issues in Space Law: Legal Tools

Some introductory remarks

ECSL Practitioner's Forum, Paris, 23-03-2018



ATTACK ORIGINS

#	Country
599	United States
163	China
91	Netherlands
60	Canada
45	Hong Kong
33	France
25	Mil/Gov
21	Taiwan
19	Italy
16	Turkey

ATTACK TARGETS

#	Country
887	United States
51	Hong Kong
39	Spain
32	Thailand
28	Argentina
22	Canada
21	Norway
20	Portugal
17	Australia
17	Bulgaria



ATTACKS

Timestamp	Organization	Attacker Location	IP	Target Location	Service	Type	Port
2014-06-25 08:32:59.06	CHINANET-HN Hengyang	Changsha, China	218.77.79.43	Kirkville, United States	ms-term-services		3389
2014-06-25 08:32:59.97	LLC Kvazar Telecom	unknown, Russia	195.254.186.227	Saint Louis, United States	ssh		22
2014-06-25 08:32:59.98	Primesoft NZ LTD	unknown, New Zealand	202.36.227.103	Saint Louis, United States	unknown		52359
2014-06-25 08:32:59.98	Beijing Sanxin Shidai Co.Ltd	Beijing, China	118.192.48.27	Seattle, United States	unknown		49152
2014-06-25 08:33:00.30	Webhosting.Net	Miami, United States	67.215.180.74	Miami, United States	CrazyNet		17500
2014-06-25 08:33:01.15	Shanghai Caohejing IDC of	Shanghai, China	210.51.56.188	Seattle, United States	smtp		25
2014-06-25 08:33:01.16	GVM Customer	unknown, Romania	93.120.27.62	San Leandro, United States	qotd		17
2014-06-25 08:33:01.17	Glamour Hair	Oudewater, Netherlands	92.68.153.193	Englewood, United States	microsoft-ds		445

ATTACK TYPES

#	Service	Port
328	http	80
77	domain	53
66	ms-term-services	3389
62	unknown	21320
60	microsoft-ds	445
57	snmp	161
52	ms-sql-s	1433
46	ssh	22

So what are we talking about...?

- ◆ ‘Cyber’ = ‘Everything having to do with the **Internet** considered collectively’ (*Wiktionary*)
- ◆ ‘Cyber-’ = ‘From “cybernetic”, from the Greek for “skilled in **steering** or **governing**”, may refer to: cybernetics, a transdisciplinary study of **control** and **communications** (...); Cyberspace, the **global technology environment**’ (*Wikipedia*)

→ Outer space...?

1. Outer space, like cyber space, is a ‘global technology environment’
2. All space activities need to be ‘steered’ & ‘governed’, whether using the Internet or not; & they are indeed ‘controlled’ & ‘communicated with’
 - Cyber ‘nuisance’ against space infrastructure, activities & services ↔ use of space infrastructure & technology for cyber ‘nuisance’

→ The Law...?

- ◆ Internet, digitalization & globalization: civil cyber ‘nuisance’ ↔ security-related cyber ‘nuisance’
 - Criminal law ↔ ... *law on the use of force*...?
 - ‘Nuisance’ intentional or non-intentional; in many cases addressed by ‘(harmful) interference’ ‘law’!?
- ◆ Beyond interference *lex lata* mostly yet to be developed, nationally & internationally → *lex ferenda* ...?

Let's be careful with terminology...

In particular if already established (legal) meaning:

- ‘Cyber warfare’ \leftrightarrow ‘War on drugs’ ...?
- ‘Cyber security’
 - Art. 1(1), UN Charter: ‘international peace and security’
- ‘Cyber force’
 - Art. 2(4), UN Charter: ‘threat or use of force’
- ‘Cyber attack’
 - Art. 51, UN Charter: ‘armed attack against a state’

Cyber attack...?



**Cyber
sabotage!**

...and precise with international law

◆ ‘Customary international law’

- Requires *state* practice & ‘*opinio iuris*’ – also of *states*
- ≠ The practice / opinion of individual experts, academics, NGOs, private companies
- ≠ The contents of ‘guidelines’, ‘recommendations’, ‘manuals’ etc. *without being condoned as such by official state organs*
- National law ≠ (customary) international law ←→ may *arguably* be state practice / reflect ‘*opinio iuris*’

Business Insider, 07-12-2017

The space kingdom of Asgardia says it's the first nation with 'all of its territory in space'

- **A non-governmental organization called Asgardia wants to become the first kingdom and nation-state in space.**
- **On Wednesday, the group deployed its first satellite into orbit around Earth.**
- **Asgardia claims the small satellite's deployment means it is "the first nation to have all of its territory in space."**

"Asgardia will be a space nation that is a trans-ethnic, trans-national, trans-religious, ethical, peaceful entity trying to settle the humanity in space,"

Are you kidding me?

◆ A 'State' under international law has:

1. A territory
2. A permanent population living on such territory

3. Effective government over both

4. Recognition by existing states (generally speaking)

- Cf. Palestine & Taiwan

◆ This is terminological pollution

Are you kidding me?

- ◆ *Would cyber interference with Asgardia's satellite amount to an 'armed attack', to the 'use of force against the territorial integrity or political independence', to a 'threat to international peace & security'? Would 'someone' be entitled to exercise 'self-defense', use 'counter-force' & reprisals, invoke UN Charter obligations?*