Cyber attacks
and the law of armed conflict

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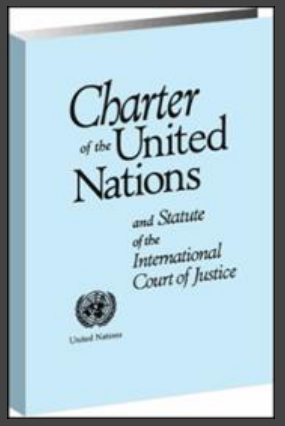
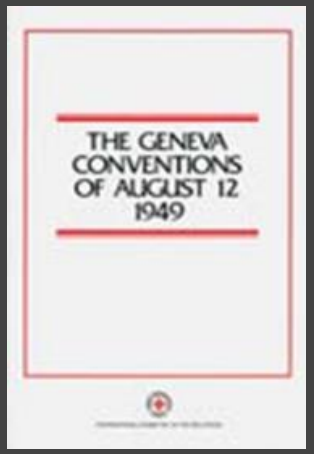
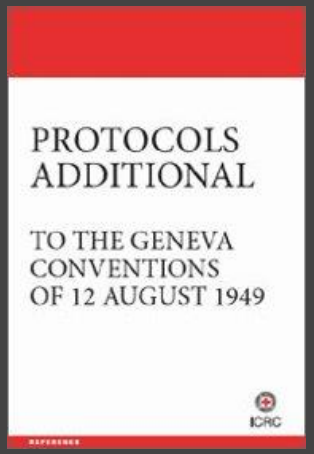
International law governing cyber “attack”

- UN Charter law
  - *Jus ad bellum*



- International humanitarian law
  - *Jus in bello*

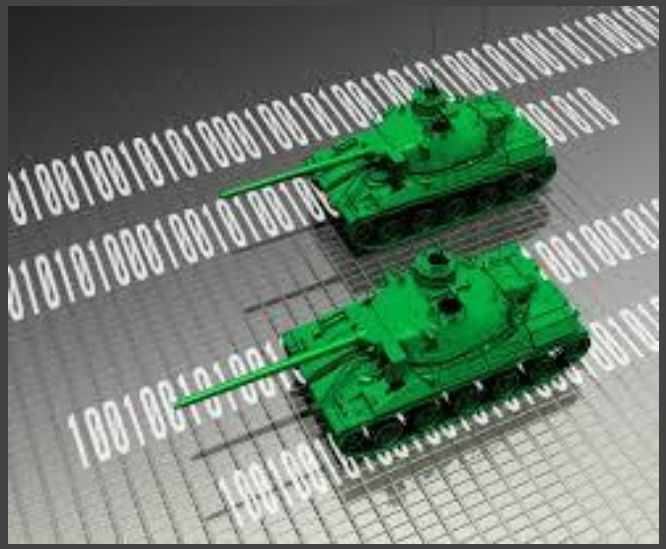




Legal classification of cyber events

International armed conflict

- Common article 2 of the Geneva Conventions
- *Prosecutor v. Tadic*, ICTY
  - *"a resort to armed force between States"*
- Attribution…
  - to State directly
  - or via a proxy



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Non-international armed conflict

- Common article 3 of the Geneva Conventions
  - ICTY+: organization of parties, intensity of hostilities
- Organization
  - C2, weapons, ability to apply LOAC, sanctions…
  - Virtual organizations?
- Intensity
  - Cyber event within existing NIAC
  - Cyber alone
- Attribution…

Targeting concepts distilled

Attack subject to:

1) Military necessity

2) Distinction
3) Proportionality
4) Precaution

5) Humanity (limitations on means and methods)

Defining “attack” in LOAC

*Acts of **violence** against the adversary, whether in offence or defence*

Art 49(1) AP I

- Tallinn Manual:

  *A cyber attack is a cyber operation, whether offensive or defensive, that is reasonably expected to cause injury or death to persons or **damage** or destruction to objects*

  Tallinn Manual, Rule 30

- Does impairment of function equate to “damage”?

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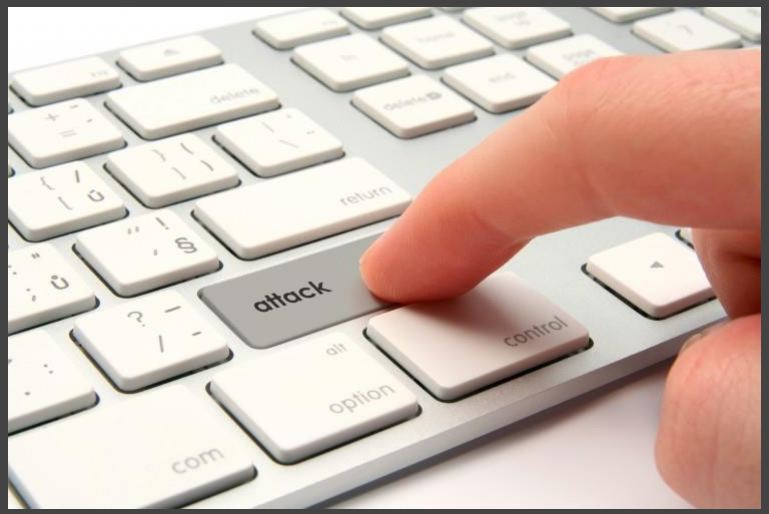
“Attacks”?

- Disrupting civilian power grid
- Denial of internet banking service
- Blocking BBC website
- Blocking access to Facebook
- Disrupting water treatment plants



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Distinction in attack

- Persons
  - Fighting forces vs. civilians
- Objects
  - Civilian objects vs. military objectives
  - Military objectives:
    - Objects which by their **nature, location, purpose** or **use** make an effective contribution to military action
    - And whose destruction, capture or neutralization offers a definite military advantage

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Distinction in attack

- Dual use objects
- Cyber infrastructure as a target
- Geographical limit of the conflict
- Law of neutrality in cyberspace

Distinction in attack

Indiscriminate attacks are prohibited

Art 51(4)(c) AP I

- Not directed at a specific military objective
- Employ method or means which cannot be directed at a specific military objective
- Employ a method or means which cannot be limited

- How specifically can malware be targeted?

Proportionality in attack

Prohibited:

An attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof,

which would be excessive in relation to

the concrete and direct military advantage anticipated

Art 51(5)(b) AP I

- Damage includes impairing functionality
- 2nd and 3rd order effects

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Precautions in attack
(and other ops)

In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.

Art 57(1) AP I

- Need to understand the target
  - "*…Mission planners should have, where feasible, appropriate technical experts available to assist them in determining whether appropriate precautionary measures have been taken.*"

Tallinn Manual, p. 166

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Cyber weapons

[i]n the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited

Art 36 AP I