

Cybersecurity **(Definitions)**

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A note on security terminology

- No single and consistent terminology in the literature!
- Be careful not to confuse while reading papers and books

Terminology

■ Computer Security

- automated tools and mechanisms to protect data in a computer, even if the computers are connected to a network
 - against hackers (intrusion)
 - against viruses
 - against Denial of Service attacks

■ (Inter)Network Security

- measures to prevent, detect, and correct security violations that involve the transmission of information in a network or interconnected network

1. Definitions

(Cybersecurity definition)

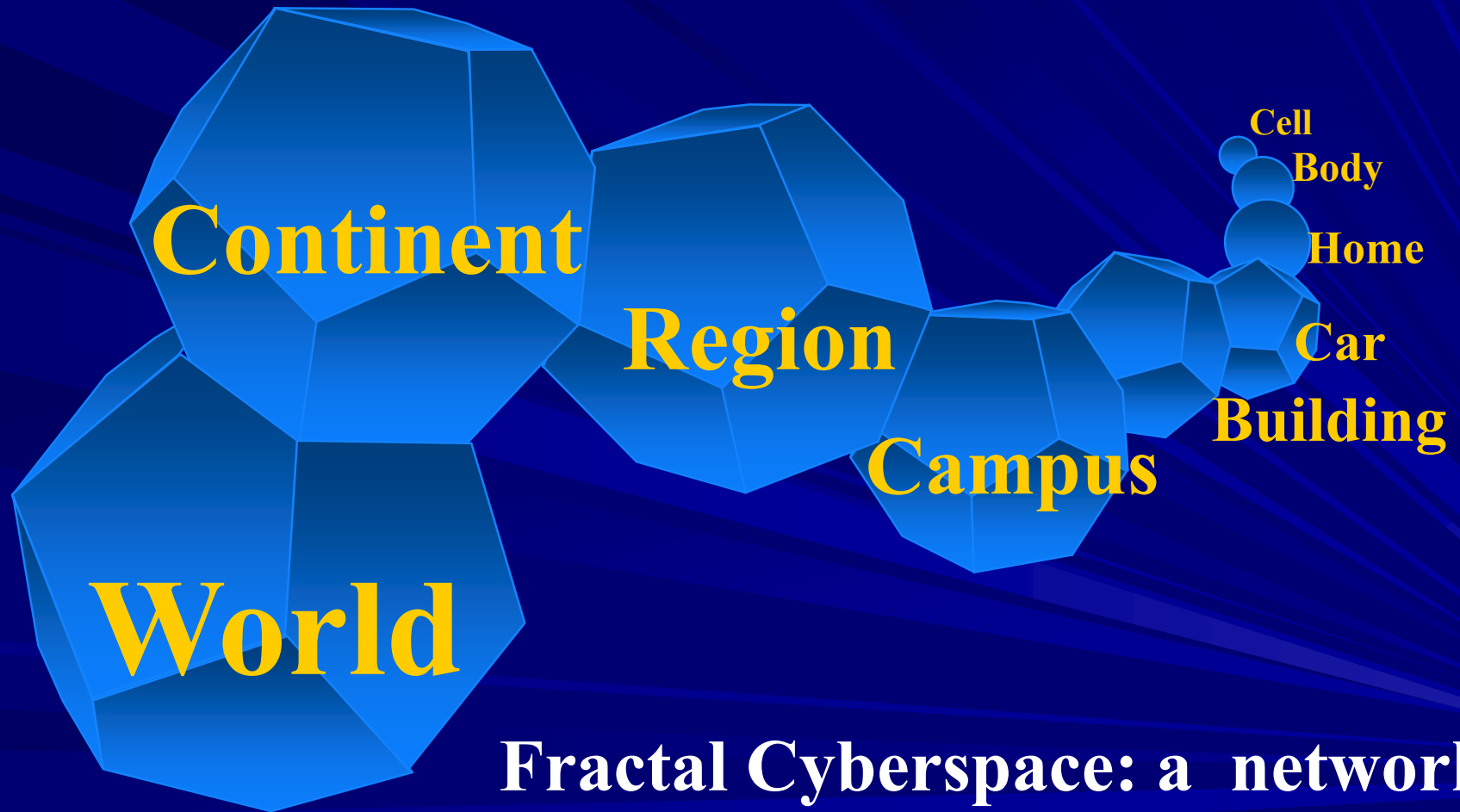
One way to think about it

Cybersecurity = **Security** of Cyberspace

One way to think about it

Cybersecurity = Security of **Cyberspace**

Everything will be in **cyberspace**
covered by a hierarchy of computers!



**Fractal Cyberspace: a network
of ... networks of ... platforms**

One way to think about it

Cybersecurity = Security of **Cyberspace**

information systems
and networks

It's not really the security of the information systems and networks that we care about, it's that we care about the operations and assets that depend on these information systems.

One way to think about it

Cybersecurity = security of information
systems and networks

+ with the goal of
protecting operations
and assets

One way to think about it

Cybersecurity = security of information systems and networks with the goal of protecting operations and assets

People often think of security as being security against **attackers**, but as we showed earlier you also need to protect against **accidents** and **failures**

One way to think about it

Cybersecurity = security of information systems and networks with the goal of protecting operations and assets

security in the face of attacks, accidents and failures

One way to think about it

Cybersecurity = availability, integrity and secrecy of information systems and networks in the face of attacks, accidents and failures with the goal of protecting operations and assets

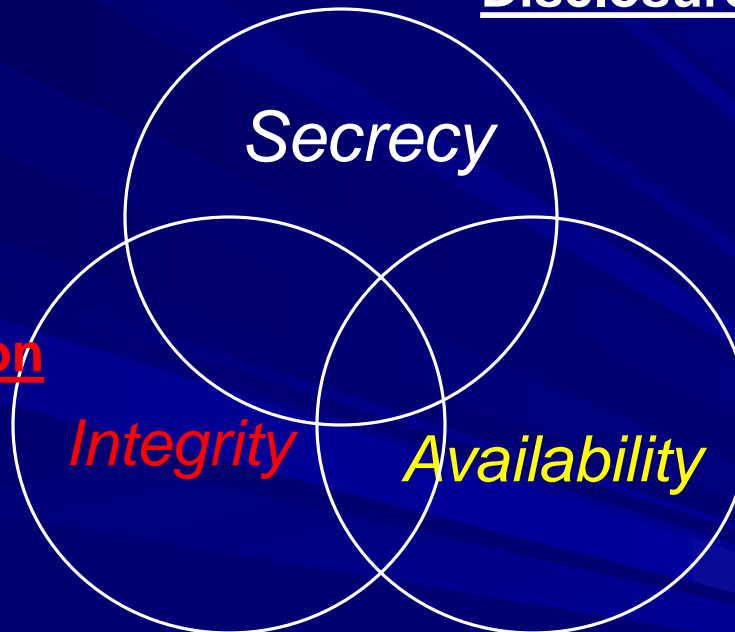
One way to think about it

Cybersecurity = security of information systems and networks in the face of attacks, accidents and failures with the goal of protecting operations and assets

availability, integrity
and secrecy

Security Objectives

Prevent/detect/deter improper
Disclosure of information



Prevent/detect/deter
Improper modification
of information

Prevent/detect/deter improper
Denial of access to services

One way to think about it

Cybersecurity = security of information systems and networks in the face of attacks, accidents and failures with the goal of protecting operations and assets

Hardware, Software,
Storage and Network
Devices, ..etc.

In Context

corporate cybersecurity = availability, integrity and secrecy of information systems and networks in the face of attacks, accidents and failures with the goal of **protecting a corporation's** operations and assets

national cybersecurity = availability, integrity and secrecy of the information systems and networks in the face of attacks, accidents and failures with the goal of **protecting a nation's** operations and assets

In Context

corporate cybersecurity = availability, **integrity** and secrecy of information systems and networks in the face of attacks, accidents and failures with the goal of protecting a corporation's **operations and assets**

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Example: Money Laundering (ML)

Thanks