

# Cybersituational Awareness - Appunti

Francesco Lorenzoni

Febrero 2025



# Contents

<b>I</b>	<b>Introduction to CS</b>	<b>5</b>
<b>1</b>	<b>Ciberconciencia Situacional</b>	<b>9</b>
1.1	Introducción . . . . .	9
1.2	Conciencia Situacional . . . . .	9
1.2.1	Situation Understanding . . . . .	10
1.2.2	Situational Awareness in Cyberspace . . . . .	10
1.3	Ciberconciencia situacional . . . . .	11
1.3.1	Vulnerabilidades . . . . .	11
1.3.2	Amenazas - Threats . . . . .	11
<b>2</b>	<b>Cyber Intelligence Visualization</b>	<b>15</b>
2.1	Visualization Charts . . . . .	15
<b>3</b>	<b>Sources of Intelligence</b>	<b>19</b>
3.1	Connection to Cyber Sensors . . . . .	19
3.2	SIEM . . . . .	19
<b>4</b>	<b>Hybrid Situational Awareness</b>	<b>21</b>
4.1	Introducción . . . . .	21
<b>II</b>	<b>Sistemas Ciberfísicos</b>	<b>23</b>



## Part I

# Introduction to CS



---

<b>1</b>	<b>Ciberconciencia Situacional</b>	<b>9</b>
1.1	Introducción . . . . .	9
1.2	Conciencia Situacional . . . . .	9
1.2.1	Situation Understanding . . . . .	10
1.2.2	Situational Awareness in Cyberspace . . . . .	10
1.3	Ciberconciencia situacional . . . . .	11
1.3.1	Vulnerabilidades . . . . .	11
1.3.2	Amenazas - Threats . . . . .	11
<b>2</b>	<b>Cyber Intelligence Visualization</b>	<b>15</b>
2.1	Visualization Charts . . . . .	15
<b>3</b>	<b>Sources of Intelligence</b>	<b>19</b>
3.1	Connection to Cyber Sensors . . . . .	19
3.2	SIEM . . . . .	19
<b>4</b>	<b>Hybrid Situational Awareness</b>	<b>21</b>
4.1	Introducción . . . . .	21

---







## Chapter 4

# Hybrid Situational Awareness

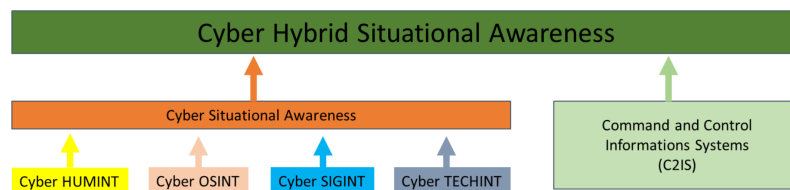


Figure 4.1: Cyber Hybrid Situational Awareness

### 4.1 Introducción

The cybersecurity decision makers will be able to jointly perceive the situation of physical world and cyber space domains as a unique decision making domain, as any decision taken in one domain affects the other three.

The main ideas to generate hybrid situational awareness are:

- ◇ Events in cyberspace (incidents, attacks...) produce effects in real-kinetic world, tan could affect to course of operations and mission development
- ◇ Events in physical world could produce effects in cyberspace, for instance a physical attack to a command post or to a electric grid infraestructure
- ◇ Cyberspace operations and kinetic operations are dependent
- ◇ Hybrid situational awareness is a fusion of cyber and physical situational awareness

Cada componente fisico tiene un componente ciber, y entonces lo que pasa en el mundo fisico afecta al mundo ciber y viceversa. La Conciencia Situacional híbrida es la fusión de la CS física y la CS ciber.

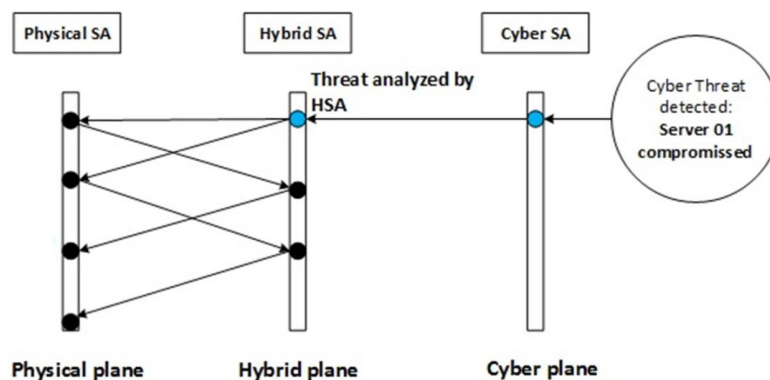


Figure 4.2: Example of Cyber event which produces an effect in the physical world



## **Part II**

# **Sistemas Ciberfísicos**

