#### **OSINT Cases:**

- A financial institution identified perpetrators of a cyberattack by analyzing social media to trace digital footprints.
- Bellingcat used flight contrails, celestial navigation, and social media to locate the "He Will Not Divide Us" flag.
- Law enforcement in Sacramento used fingerprints visible in photos of marijuana posted online to arrest a drug dealer.
- Tesla uses OSINT to track patent filings of competitors.
- In 2011, hackers used publicly available information about Sony Pictures employees for targeted phishing attacks.
- Russia's "Doppelgänger Operation" in 2023 used cloned Western news websites to spread disinformation about NATO and Ukraine.
- A Chilean burglary ring used OSINT tactics to target pro athletes by tracking their public posts and schedules.
- During the 2023 Israel-Hamas conflict, OSINT analysts used social media platform X to track troop movements and civilian impacts.

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- OSINT was used to track the Hyperliquid Whale, solving a mystery on Crypto Twitter.
- OSINT techniques helped identify a rapist behind a Hinge profile.
- Analysts used OSINT to predict troop movements during Russia's invasion of Ukraine by geolocating TikTok videos and analyzing satellite imagery.
- OSINT is used by the World Health Organization (WHO) to monitor public health issues and track disease outbreaks.
- The "Eyes on Russia" project uses OSINT and GEOINT to map the war in Ukraine, providing verifiable information for accountability groups.
- OSINT techniques are used to identify and track fugitive pedophiles online.

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### **IMINT Cases:**

IMINT was used for strategic targeting in World War II.

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 Following Hurricane Katrina, IMINT helped assess damage and coordinate relief.

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• City planners use high-resolution imagery for urban development.

- Satellite imagery tracks deforestation and pollution levels.
- IMINT can be misused for unwarranted surveillance, raising privacy concerns.
- Detailed imagery can be used for planning attacks.
- Deepfakes can create manipulated imagery for disinformation.
- During the Cuban Missile Crisis in 1962, satellite imagery confirmed the presence of Soviet nuclear missiles in Cuba.
- IMINT is used to monitor deforestation in the Amazon rainforest.
- Following the 2018 Sulawesi earthquake and tsunami, IMINT was used to assess the damage.
- Satellite imagery is used to monitor the construction of the Kerch Strait Bridge connecting Russia to Crimea.
- IMINT helps in creating 3D models of urban environments for planning and disaster preparedness.
- Satellite imagery is used to monitor the environmental impact of oil spills.
- IMINT can be used to track the movement of elephants to protect them from poachers.

## **HUMINT Cases:**

- HUMINT is crucial for infiltrating terrorist organizations, as highlighted by the 9/11 Commission.
- The FBI's "Operation GHOST STORIES" exposed a spy ring in the US.
- Cybersecurity professionals use HUMINT to identify individuals trading sensitive customer information.
- Oleg Penkovsky, a Soviet GRU colonel, provided critical intelligence to the UK and US during the Cold War.
- Hostile actors use HUMINT methods to gain access to air-gapped computers for cyberattacks.

- In Afghanistan, individuals cooperating with the coalition faced assassinations in reprisal.
- During the Cold War, Oleg Penkovsky, a Soviet GRU colonel, provided HUMINT to the UK and US about Soviet military capabilities.
- The FBI's investigation "Operation GHOST STORIES" used HUMINT to expose a Russian spy ring operating in the United States.

- HUMINT is used in counter-narcotics operations to gather information on drug trafficking networks.
- Intelligence agencies use HUMINT to understand the intentions of leaders in totalitarian states.
- HUMINT can be crucial in penetrating isolated or offline networks for cyber operations, such as the Stuxnet attack against Iran's nuclear program.
- Law enforcement uses HUMINT to gather information from within criminal organizations.
- HUMINT was used to understand the operational details of the terrorist group Al-Qaeda.

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#### **GEOINT Cases:**

 GEOINT played a significant role in locating and planning the mission to kill Osama Bin Laden.

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 Following the 2010 earthquake in Haiti, GEOINT was used to map damage and coordinate aid.

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• Cities use GEOINT for urban planning and smart city initiatives.

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 GEOINT assists in monitoring deforestation and managing natural resources.

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 The Strava fitness tracker app inadvertently revealed locations of secret military facilities.

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 GEOINT can be misused for providing precise locations for targeted attacks.

- Location data from personal devices contributes to GEOINT, raising privacy implications.
- GEOINT is used to create evacuation tracker dashboards during crises, such as the Taliban takeover in Afghanistan.
- Smart cities use GEOINT to monitor traffic flow and optimize transportation networks.
- GEOINT helps in identifying optimal locations for new cell towers and fiber optic cables for telecommunication companies.
- Following the 2010 Haiti earthquake, GEOINT was used to map damage and coordinate aid efforts.
- GEOINT is used to monitor deforestation and illegal logging activities.

- Law enforcement uses GEOINT to pinpoint the locations of criminal suspects based on metadata from photos.
- GEOINT helps in predicting areas likely to be affected by natural disasters like floods and wildfires

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#### **MASINT Cases:**

 MASINT can identify the number of blades in an aircraft engine to determine if it's hostile.

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• MASINT is essential for nuclear proliferation detection.

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• MASINT is used for environmental monitoring and disaster assessment.

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 MASINT helps identify chemical, biological, radiological, and nuclear (CBRN) threats.

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- Adversaries can analyze MASINT data to develop countermeasures.
- Analysis of subtle physical characteristics by MASINT could lead to intrusive monitoring.
- MASINT is used to monitor North Korea's nuclear weapons program.

- Acoustic MASINT can be used to detect and track submarines.
- MASINT can detect the presence of chemical agents through specialized sensors.

- Infrared sensors, a type of MASINT, can detect heat signatures of targets, including missiles.
- MASINT is used to analyze the composition of materials to identify potential threats.
- MASINT can be used for non-cooperative target recognition in military operations.
- Seismic MASINT can detect underground activities.

# CYBINT Cases:

- CYBINT helps understand motives, targets, and methods of cyber adversaries.
- The "Operation Aurora" attacks, linked to China, targeted Google and other companies for intellectual property theft.
- The 2016 attack on Ukraine's power grid left hundreds of thousands without power.
- The Yahoo data breaches between 2013 and 2016 exposed billions of user accounts.
- The WannaCry ransomware attack in 2017 affected over 100,000 organizations globally.
- Cyber espionage is used to steal sensitive information from governments and corporations.
- The "Operation Aurora" cyberattacks, linked to China, targeted Google and other companies to steal intellectual property.
- The Stuxnet worm, likely a state-sponsored attack, targeted Iran's nuclear enrichment facilities.
- The DarkHotel campaign targeted high-profile individuals staying in luxury hotels to steal sensitive information.

- The cyberattack on Ukraine's power grid in 2016 caused widespread power outages.
- The ransomware attack on the Colonial Pipeline in the US led to fuel shortages.
- Cybercriminals cloned the voice of a U.A.E. company director using AI to initiate a \$35 million bank transfer.
- Russian hackers targeted the US Office of Personnel Management (OPM) and stole personal information of millions of Americans.

# **SIGINT Cases:**

• SIGINT is crucial for intercepting communications between terrorist groups.

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• SIGINT helps monitor communications of foreign intelligence services for espionage detection.

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• SIGINT provides critical intelligence to policymakers and military leaders.

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 The NSA's bulk collection of phone records under Section 215 of the Patriot Act is an example of mass surveillance.

• Interception of personal communications without legal authorization violates privacy.

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 During the Civil Rights Movement, individuals labeled as integrationists were put under surveillance orders.

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- SIGINT can be used to monitor communications of allied nations.
- During World War II, the cracking of the German Enigma code (Ultra) provided the Allies with crucial intelligence.

- SIGINT is used to monitor communications of terrorist groups like Al-Qaeda.
- SIGINT helps in detecting and countering espionage activities by foreign intelligence services.
- The US monitored Soviet missile tests at Kapustin Yar using SIGINT stations in Turkey during the Cold War.

- SIGINT was used to intercept communications related to the Soviet invasion of Afghanistan in 1979, providing specific warnings.
- The NSA's surveillance program, PRISM, collected vast amounts of internet communications.
- SIGINT can be used to monitor compliance with international arms control agreements.