InfoSec Cinema

Using Films for Information Security Teaching

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Motivations



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- Films are a widely available cultural product
  - Consumed for leisure, enlightenment…
- Analogies with Information Security
  - Characters are attackers/defenders
- It has been used successfully in other areas
  - Health Sciences and Nursing

Question I

Do films portrait information security content?

Analyse a diverse selection of films from the information security perspective

InfoSec Film Guides

Question II

Can we develop an activity that helps teaching student information security in an engaging way?



Develop InfoSec Cinema



Experiences running two InfoSec Cinema sessions

Films and Information Security

Creating InfoSec Film Guides



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Process

i. Select films

Diverse selection of films

ii. Extract events

Compile Event Cards for each film event

iii. Organise Event Cards in guides

InfoSec Cinema database

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Film selection

Film	Year
Snow White and the Seven Dwarfs	1937
101 Dalmatians	1961
Mary Poppins	1964
The Exorcist	1973
Jaws	1975
E.T	1982
Jurassic Park	1993
The Lion King	1994
Avengers Assemble	2012
Rogue One: A Star Wars Story	2016

Snow White and the Seven Dwarfs

- Characters
  - Snow White
  - Dwarfs
  - The Queen
- Plot (spoiler free)
  - The Queen wants to be "the fairest" in the land

Rogue One: A Star Wars Story



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- Characters
  - Erso Family (Jyn, Galen)
  - Rebels
  - Empire
- Plot (spoiler free)
  - A group of rebels tries to steal the design plans of a new weapon

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Event



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- Time
- Description
- STRIDE
- ISO 27002 Control Categories
- Keywords
- Parties
- Discussion

Event Card

Time Minute 80 (5 minutes)

Scene

Scarif has a shield that only allows authenticated ships to go through but the protocol is bypassed by the rebels with an old authentication code

STRIDE Spoofing

ISO CONTROLS Human Resources | Access Control | Physical Security

Parties

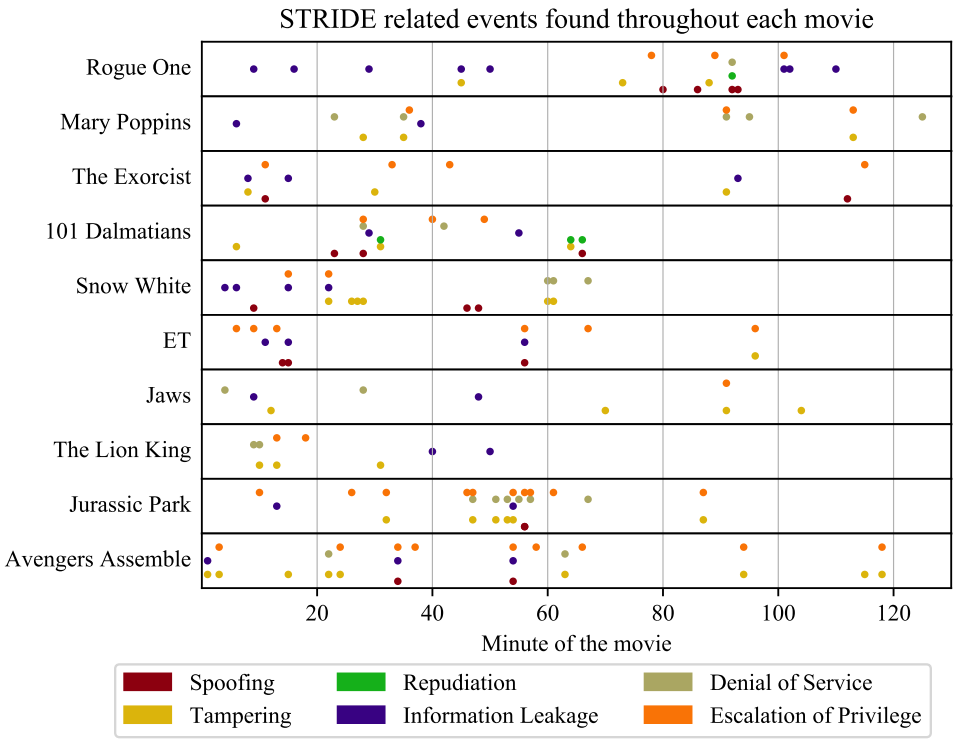
Empire — Very negative

Keywords Authentication, credentials, certificate, revocation, social engineering

Discussion

How does the shield work? Authentication is based on ships only, not on pilots. Does the Empire have a ship code revocation system? Does it work? How would you fix this? Is the guard properly trained?

STRIDE Events



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InfoSec Cinema database

InfoSec Cinema Database



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http://www.jorgeblascoalis.com/infosec-cinema/

- Benefits
  - Search engine to look for specific events/keywords
  - 10 films already analysed and ready to use
    - Although not all of them are equally suitable
  - Can be expanded with pull request

https://github.com/guizos/infosec-cinema

Running InfoSec Cinema



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How to run an InfoSec Cinema Session



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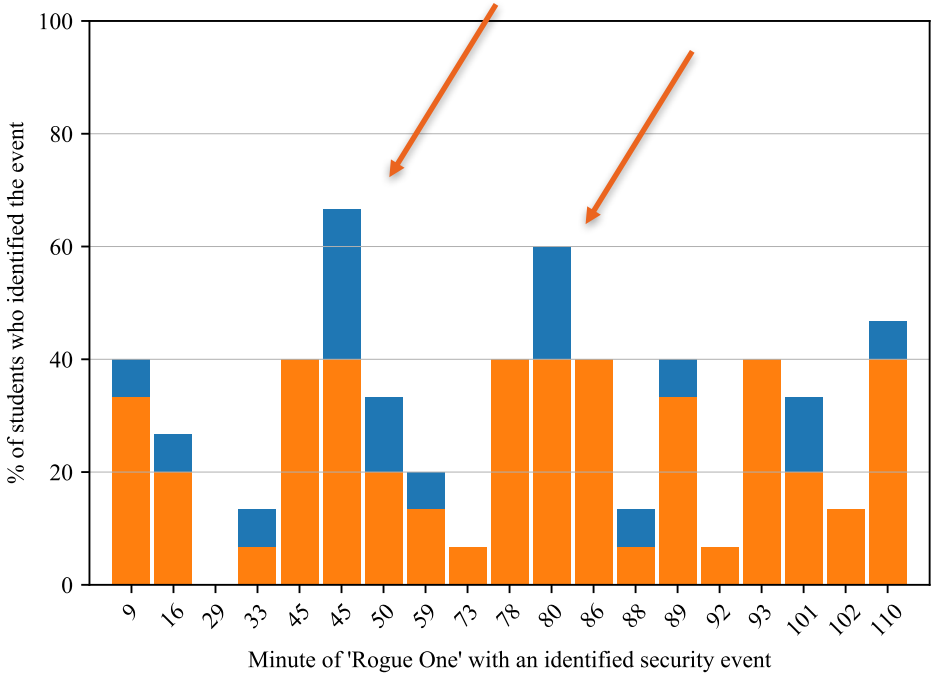
1. Make sure you can run a session in your jurisdiction
2. Pick a film (or analyse one)
3. Prepare a supporting presentation
4. Watch the film
5. Discuss!

Our experience

- Two sessions (end of the term)
  - BSc in Management – 7 students
  - MSc in Information Security – 12 students
- Rogue One: A Star Wars Story

During our sessions we collected data from students

Identified events



Some Observations



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- Students tend to identify negative aspects rather than positive behaviours
- MSc students identified more technical events
- Students identified events we did not consider

Student Feedback

"This activity can train people in a way of thinking which is very applicable to real-life circumstances"

"A great approach with interesting examples."

"A film cannot portrait all information security events known in the real world"

Conclusions



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Conclusions

- Films can be used to for teaching inf. security
  - Film can be adapted to specific audiences
- Sometimes a full film may be “too much”
  - Use of single scenes
- Audiences are biased towards certain events
  - We can use this activity to identify those biases

The End

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