InfoSec Cinema
Using Films for Information Security Teaching

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Motivations

- 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
Do films portrait information security content?

Analyse a diverse selection of films from the information security perspective

InfoSec Film Guides
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
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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<table>
<thead>
<tr>
<th>Film</th>
<th>Year</th>
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<tbody>
<tr>
<td>Snow White and the Seven Dwarfs</td>
<td>1937</td>
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<tr>
<td>101 Dalmatians</td>
<td>1961</td>
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<td>Mary Poppins</td>
<td>1964</td>
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<td>The Exorcist</td>
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<td>Jaws</td>
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<td>E.T</td>
<td>1982</td>
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<td>Jurassic Park</td>
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<td>The Lion King</td>
<td>1994</td>
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<td>Avengers Assemble</td>
<td>2012</td>
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<tr>
<td>Rogue One: A Star Wars Story</td>
<td>2016</td>
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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

• 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

- 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

STRIDE related events found throughout each movie

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<th>Movie</th>
<th>20</th>
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Minute of the movie

- **Red**: Spoofing
- **Green**: Repudiation
- **Yellow**: Tampering
- **Dark blue**: Information Leakage
- **Orange**: Escalation of Privilege
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InfoSec Cinema Database

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
How to run an InfoSec Cinema Session

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
Some Observations

• Students tend to identify negative aspects rather than positive behaviours

• MSc students identified more technical events

• Students identified events we did not consider
“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

• 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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