MAPPING SOCIAL MEDIA FOR SECURITY APPLICATIONS

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SO WHAT? WHO CARES

- **Space:** *Identifying Terrorists*
- **Problem:** *Terrorists can provide weak signals on social media prior to an attack. It would be useful to pick up on these.*
- **Solution:** *We (a 3ʳᵈ party, which already has proof on concept code in the public domain) can identify a persons social media on behalf of Airports/Customs & Boarder/Government, then gather available public data on them for analysis.*
- **Future Applications:** Can *provide either raw data or pre analyzed results that flag anomalous behavior as a service. Meaning you can apply extra scrutiny & attention to flagged individuals.*

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SOCIAL MAPPER

- Social Mapper is a Security Tool for identifying a specific persons social media presence.

- It's Free/Open Source: https://github.com/Greenwolf/social_mapper

- Overview:
  - Instruments browser
  - Logs into sites: Twitter, Facebook etc
  - Clicks like normal user
  - Performs searches based on name
  - Identifies target with Facial Recognition
  - Generates report showing a targets online presence

- Currently works on 7 social media sites

- Used by(Over 75,000 downloads, 2100+ github stars):
  - Threat Intelligence Companies
  - Red Teamers & Penetration Testers
  - Criminals
  - Airports? Checkpoints? Venues? ☺

SCRAPING DATA

- Once you identify a Social Media Profile scraping public data is trivial
- Can find: (depending on privacy settings)
  - Facebook Timeline posts
  - Twitter Tweets
  - Facebook Interests
  - Twitter Followings
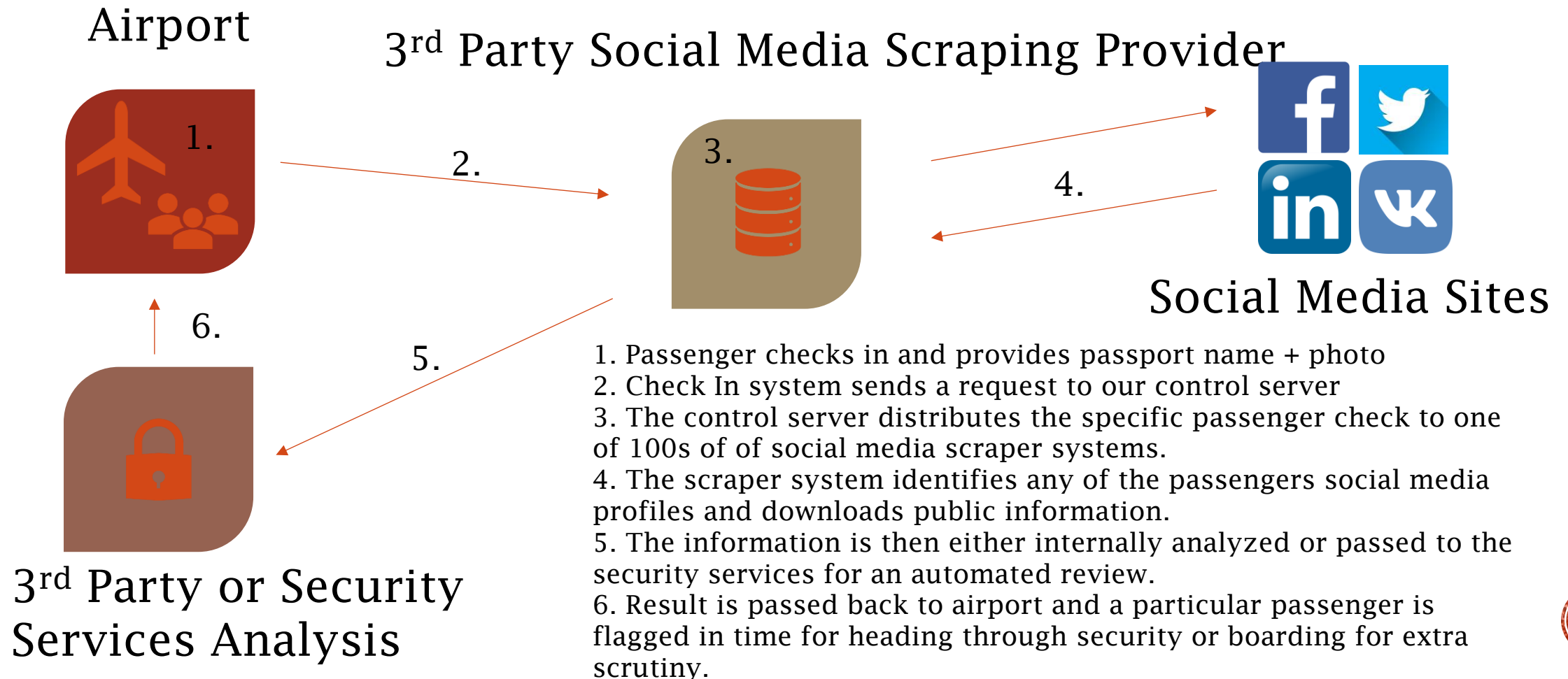 - Facebook friends
  - Etc etc on other sites

SECURITY IMPROVEMENTS & RESULTS

- Analysis
  - Keyword Searches
  - Topic Extraction
  - Affect Analysis
  - Language Processing

- Identification Examples
  - Those who express Radical beliefs on Facebook
  - Post images or glorify guns along on Twitter
  - Those with violent or angry tendencies
  - Connected to/following known persons of interest/suspects

- Source – Countering Lone Actor Terrorism – FOI (https://www.foi.se/download/18.7fd35d7f166c56ebe0bfffa/1542623724738/Countering-lone-actor_FOI-S-5372-SE.pdf)

POSSIBLE AIRPORT SOLUTION

Airport

3rd Party Social Media Scraping Provider

1.

2.

3.

4.

Social Media Sites

6.

5.

3rd Party or Security Services Analysis

1. Passenger checks in and provides passport name + photo
2. Check In system sends a request to our control server
3. The control server distributes the specific passenger check to one of 100s of of social media scraper systems.
4. The scraper system identifies any of the passengers social media profiles and downloads public information.
5. The information is then either internally analyzed or passed to the security services for an automated review.
6. Result is passed back to airport and a particular passenger is flagged in time for heading through security or boarding for extra scrutiny.

REAL WORLD EXAMPLES

ADDITIONAL QUESTIONS

- How Accurate is it? – 80-90%

- Can Social Media Sites detect it? – No

- Why did you build it? – Helps security professionals with open source intelligence work

- What's in it for you? – Been invited to Boston, minor publicity in security sphere, business opportunity

- What happens if they move to encrypted comms like whatsapp? – This only gathers public information, it wouldn't gather any private messaging data.

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SUMMARY & THOUGHTS

- Provide Additional Checks for Weak Signals
- Not a silver bullet or alternative to current methods
- Is improved by co ordination with the security services
- Won't flag those who avoid social media

- Is all this a good idea?
- I'm just showing what is technologically possible

Q&A

- Thanks for listening
- Any Questions? AMA
  - via email is fine too!

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