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Human error. Conquered.

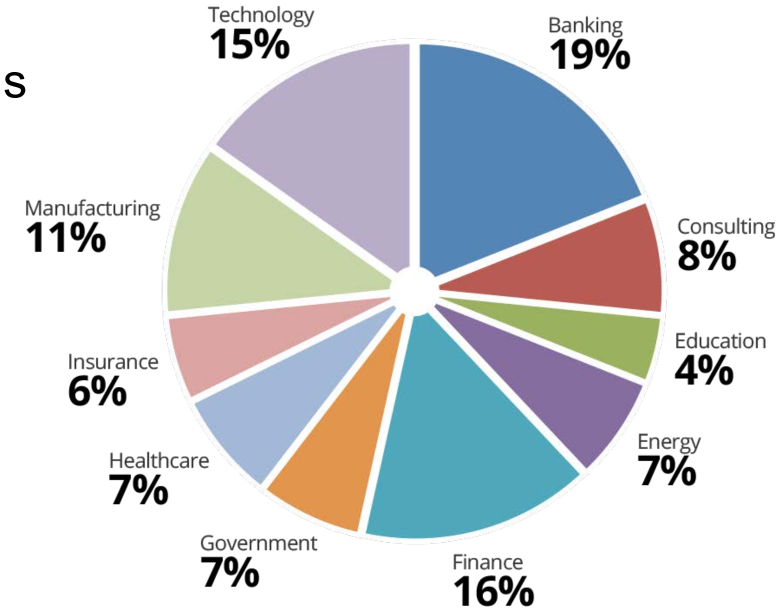
Think Like a Hacker: Learn How to Use OSINT to Defend Your Organization

Rosa L. Smothers

SVP of Cyber Operations

KnowBe4, Inc.

- The world's most popular integrated Security Awareness Training and Simulated Phishing platform
- Based in Tampa Bay, Florida, founded in 2010
- CEO & employees are ex-antivirus, IT Security pros
- 200% growth year over year
- We help tens of thousands of organizations manage the problem of social engineering



Agenda

- Secure Set Up to Conduct OSINT Investigations
- Language and Culture
- How and Where to Conduct Searches
- Locations and Images
- Apps and Tools

Safety First

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Secure Your Setup Before Any Investigation

Hardware/Software or Cloud-Based

- Dedicated Machine
- Disk Wiper
- Virtual Machine
- VPN

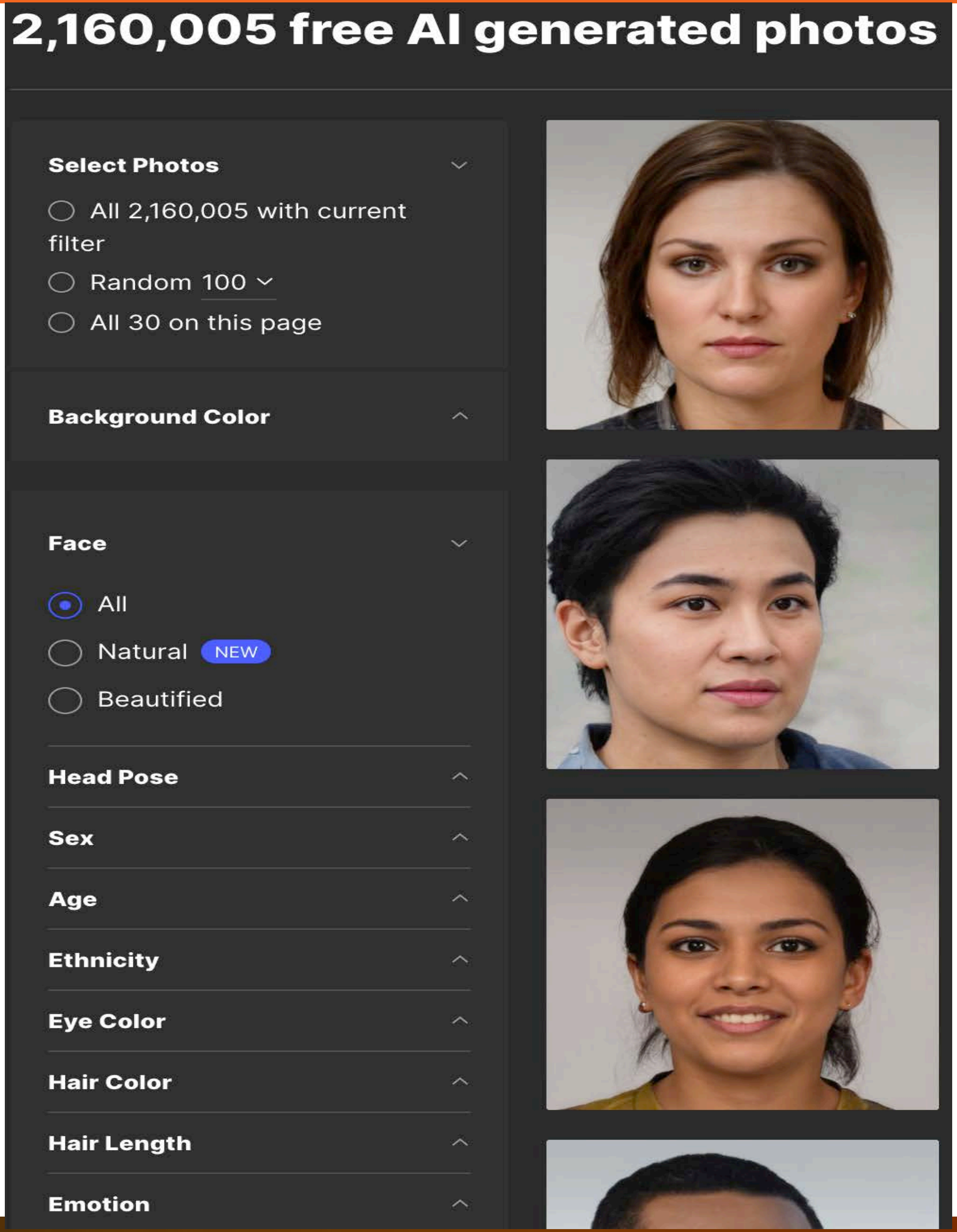
- Amazon Lightsail, MS Azure portal, Google Cloud, etc.
- Virtual Machine instance(s)
- VPN

Personas

All About the Bona Fides

Create Your Persona(s)

- Social Media profile
- Image
- Robust and Consistent Background
- Aged Profile



2,160,005 free AI generated photos

Select Photos

○ All 2,160,005 with current filter

○ Random 100

○ All 30 on this page

Background Color

Face

● All

○ Natural NEW

○ Beautified

Head Pose

Sex

Age

Ethnicity

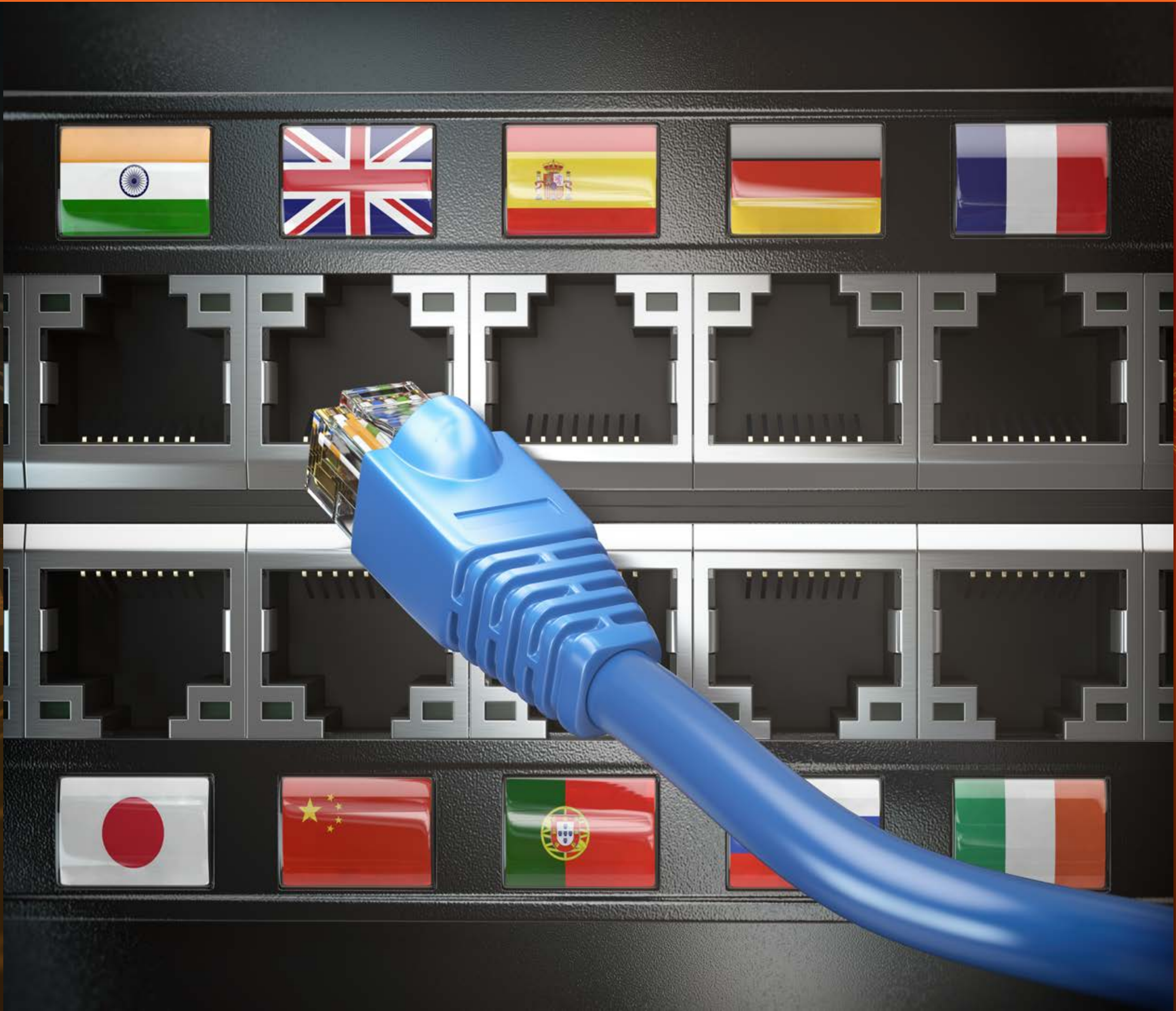
Eye Color

Hair Color

Hair Length

Emotion

Think Like the Adversary



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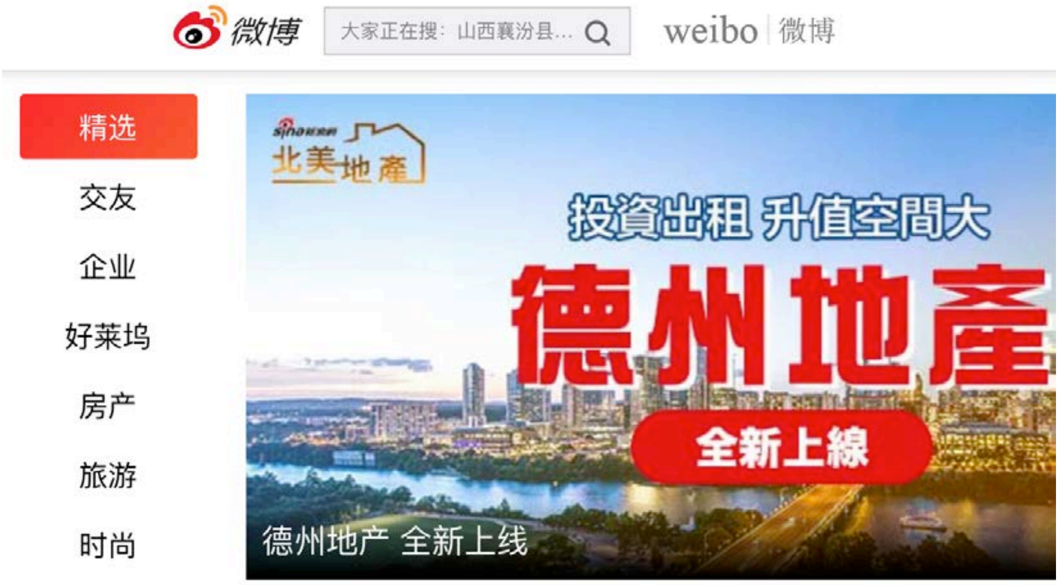
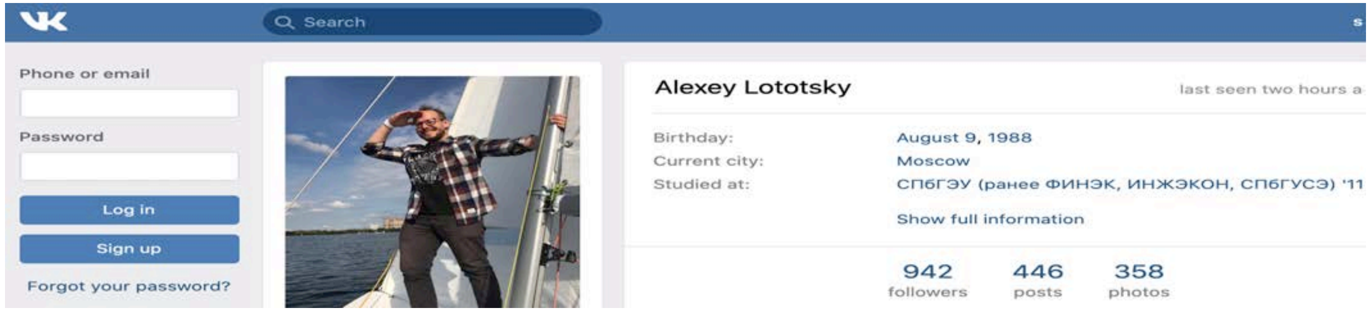
“It’s What I’d Do/Say/Think…”

Avoid Mirror Imaging

- Social Media Platforms Based Upon Culture
- Persona’s Image
- Social Media Connections/Interest Groups





Alexey Lototsky

last seen two hours a

Birthday: August 9, 1988

Current city: Moscow

Studied at: СПбГЭУ (ранее ФИНЭК, ИНЖЭКОН, СПбГУСЭ) '11

Show full information

942 followers 446 posts 358 photos

Watch Your Language

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The ABCs (or АБВы or ابت…) of Investigating Accounts

Linguistic and Cultural Context is Key

- Social Media Platforms Based Upon Culture
- Persona’s Image
- Use of Language

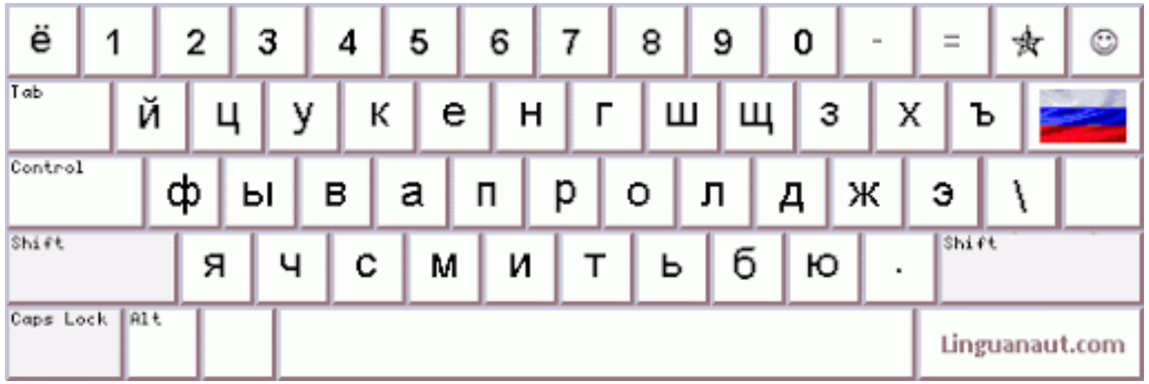
vputin@yandex.ru ≠ впутин@яндекс.ру

balassad@syriantelecom.com.sy ≠ بَشَارالأَسَد@syriantelecom.com.sy

The ABCs (or АБВы or ابت…) of Investigating Accounts

Linguistic and Cultural Context is Key

- Usernames are often a “tell”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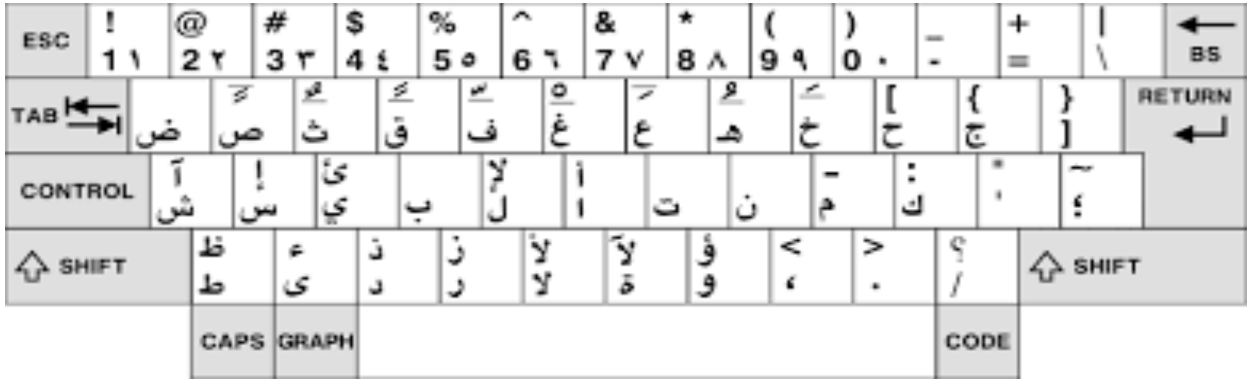
Linguanaut.com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CAPS GRAPH CODE

Jabwthac,@yandex.ru

Hojvhrg;@zain.com

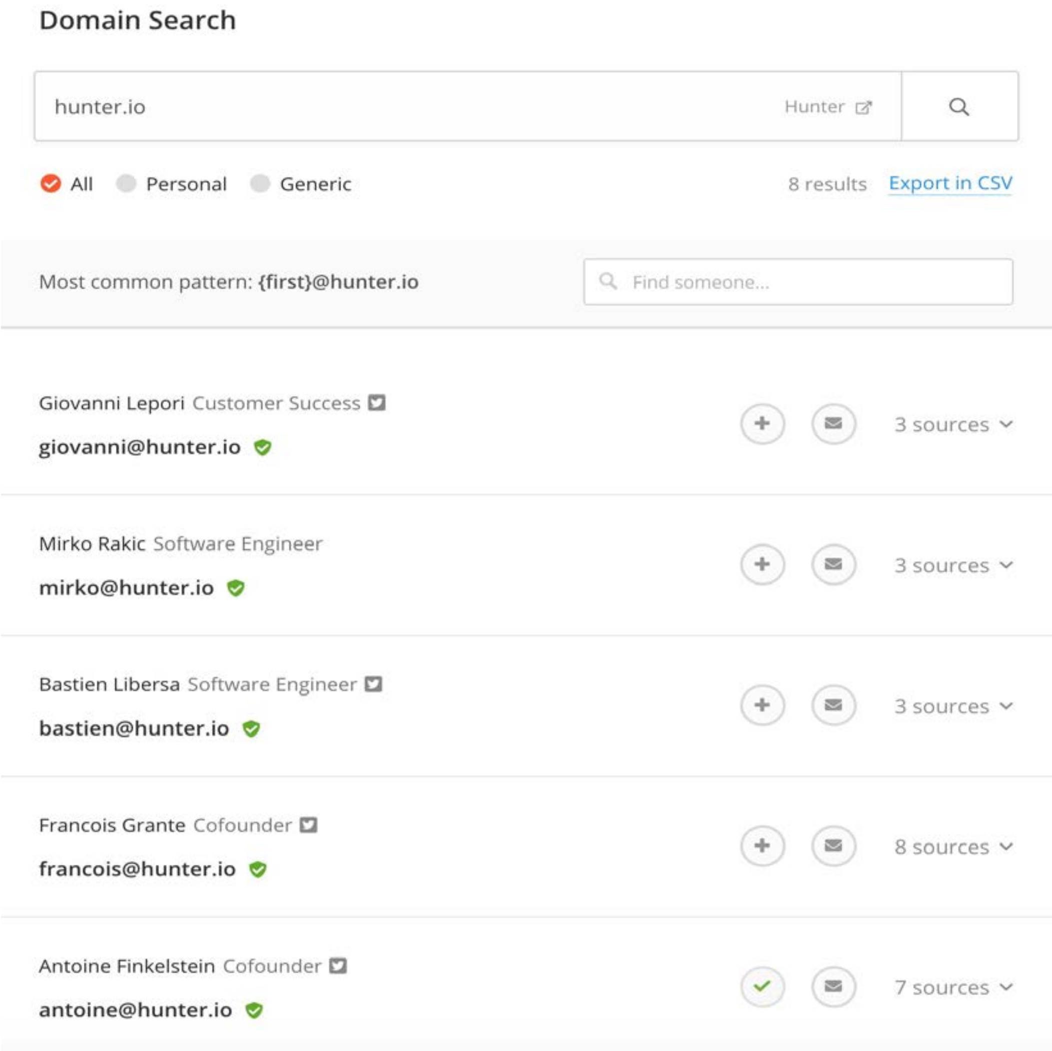
Офицерфсб@yandex.ru

اخترقاك@zain.com

The ABCs (or АБВы or ابت...) of Investigating Accounts

Usernames

- Naming Conventions
- Numbers in a username often birthdate of user or their children
- Can indicate interest (sports or pop culture reference)



Domain Search

hunter.io

● All ○ Personal ○ Generic

8 results

Most common pattern: {first}@hunter.io

Giovanni Lepori Customer Success
giovanni@hunter.io
3 sources

Mirko Rakic Software Engineer
mirko@hunter.io
3 sources

Bastien Libersa Software Engineer
bastien@hunter.io
3 sources

Francois Grante Cofounder
francois@hunter.io
8 sources

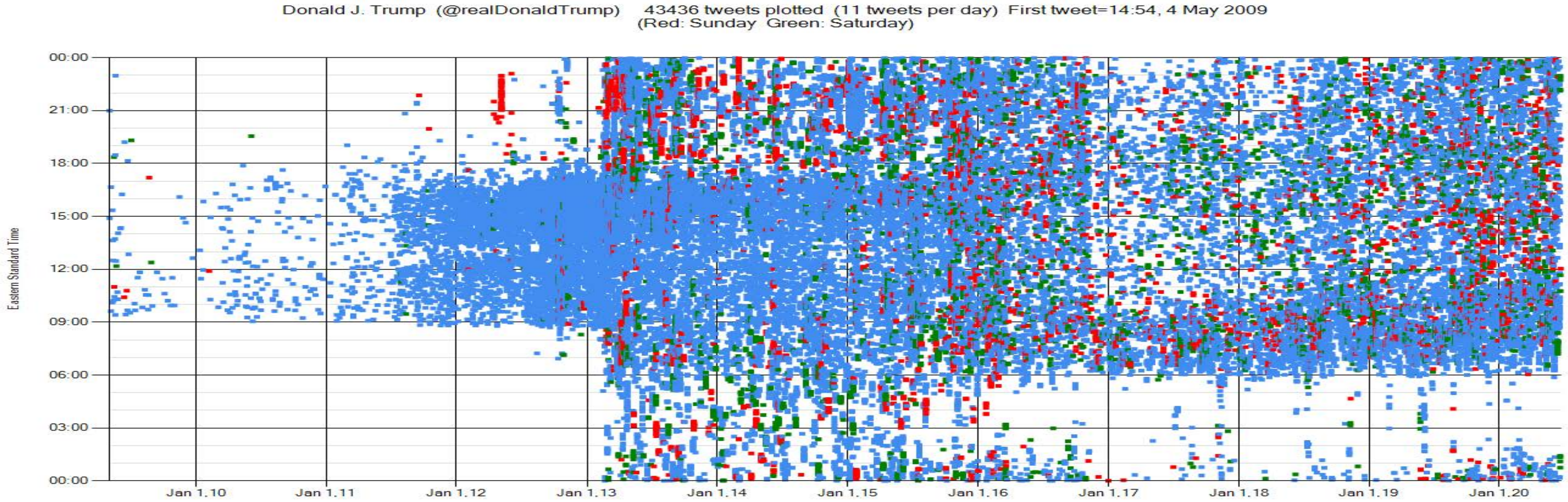
Antoine Finkelstein Cofounder
antoine@hunter.io
7 sources

Pattern of Life

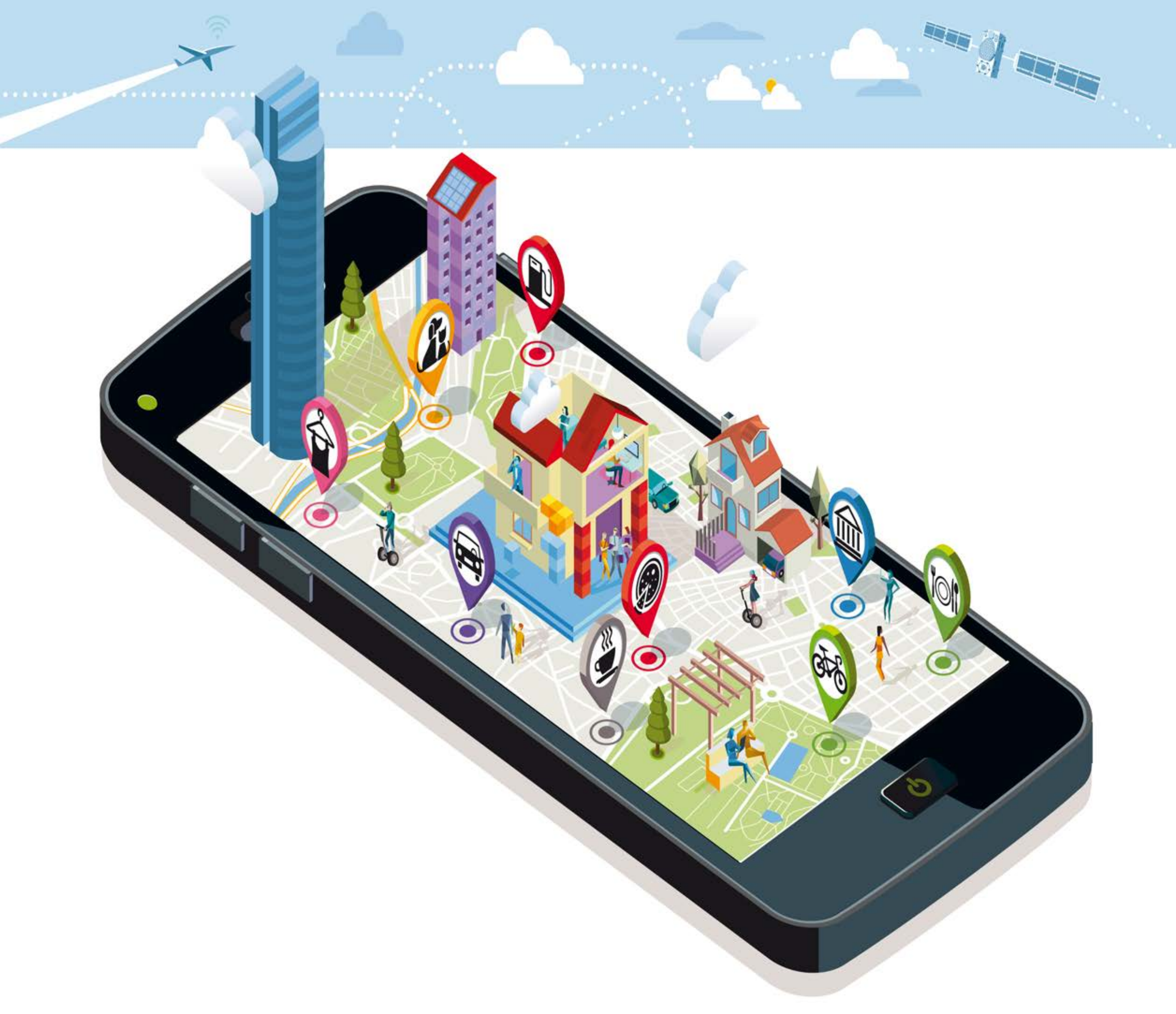
Time After Time

Date and Time is an Indicator

- **Pattern-of-life analysis** is a method of observation specifically used for documenting or understanding a subject's habits



Locations & Images



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Location, Location, Location

- Aerial Analysis

What time is it?

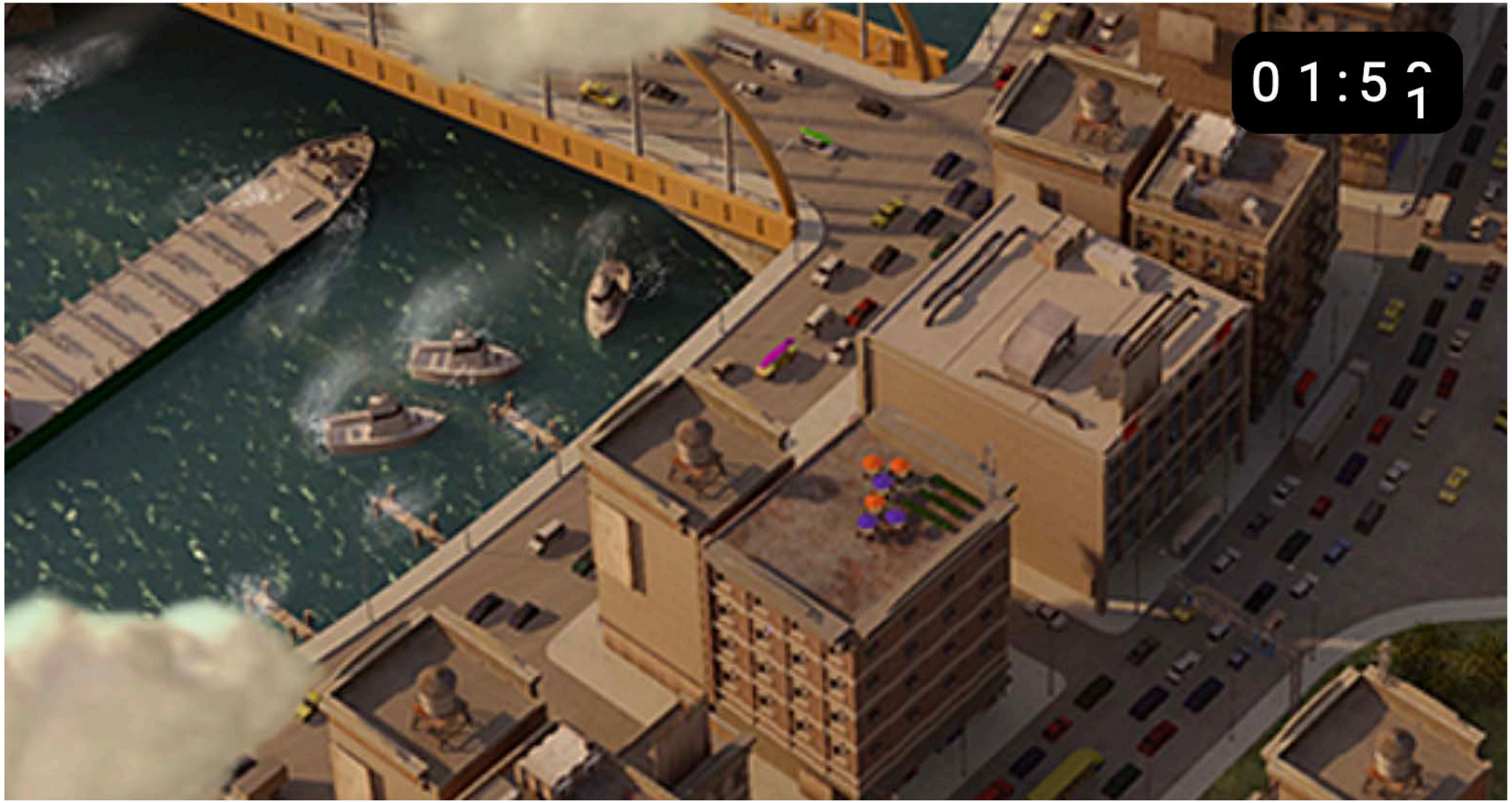
What is today?

What season is it?

What can be expected tomorrow?

What type of industry drives this economy?

Where are we?



A Photo Says a Thousand Words

- Photo Analysis

  Meta data

  Clone detection

  Magnification/Zoom to detect miniscule details

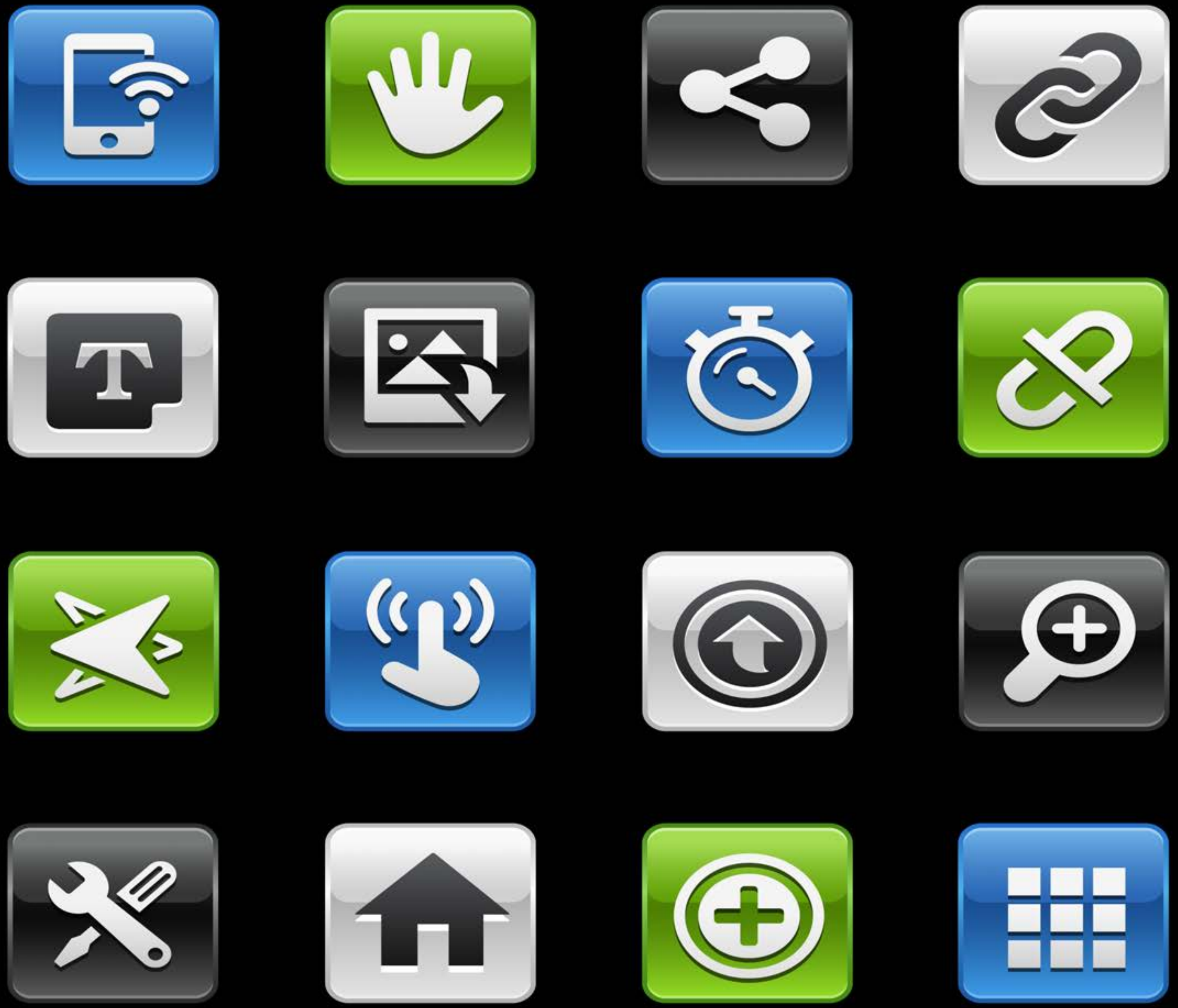
  Principal Component Analysis (PCA)

FotoForensics

Forensically Beta

*https://www.cia.gov/kids-page/games/games_aerial_analysis.html

Apps & Tools



The Right Tool for the Right Job

Plenty of Options, Some Only Dependent upon OS of Choice

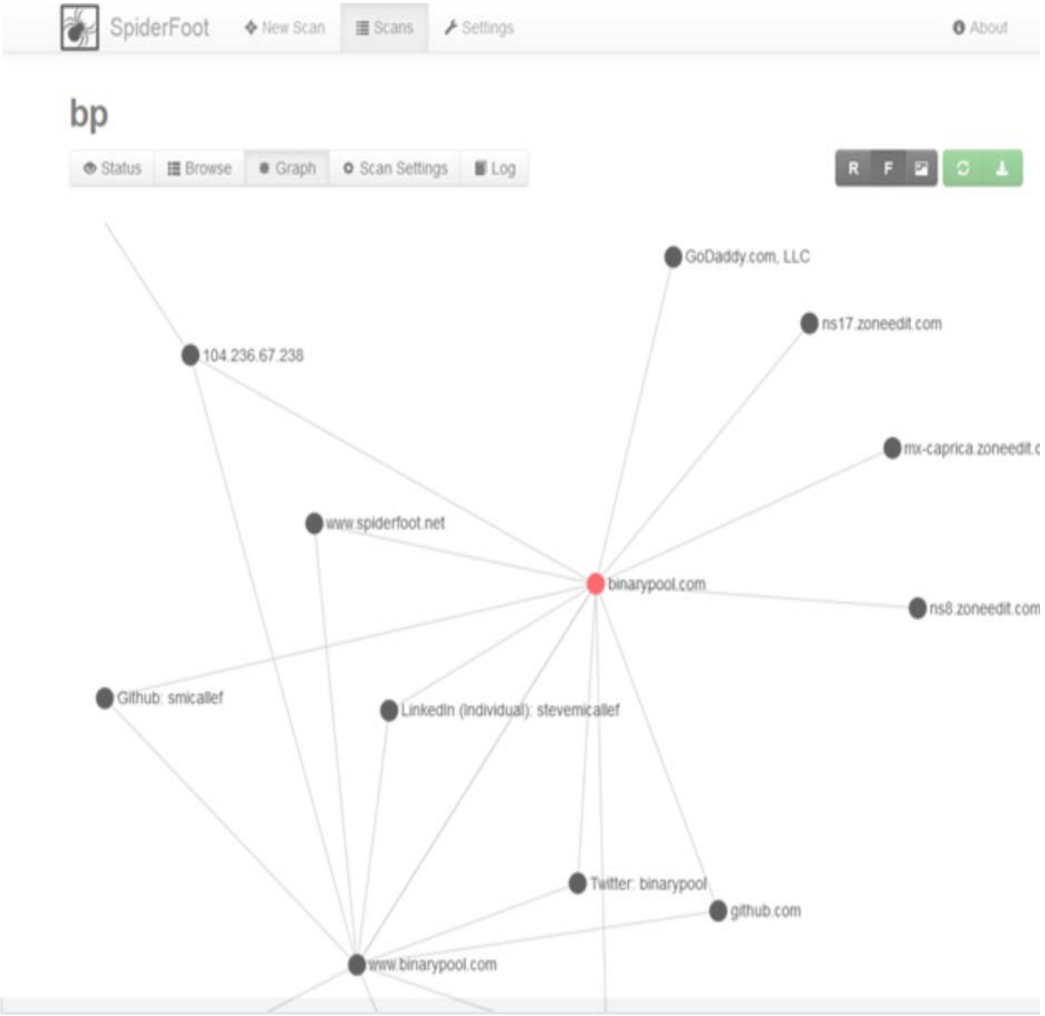
- Multiple Search Engines
  - Google Hacking DB
  - Shodan – device discovery
  - Contextualwebsearch.com

- Public Databases
  - Property Records
  - Open S3 Buckets

- Dark Web Data Breaches

- Data Visualization

- GitHub (.py)
  - PaGoDo, Tweepy,



The KnowBe4 Security Awareness Program WORKS

Baseline Testing

Use simulated phishing to baseline assess the Phish-prone™ percentage of your users.

Train Your Users

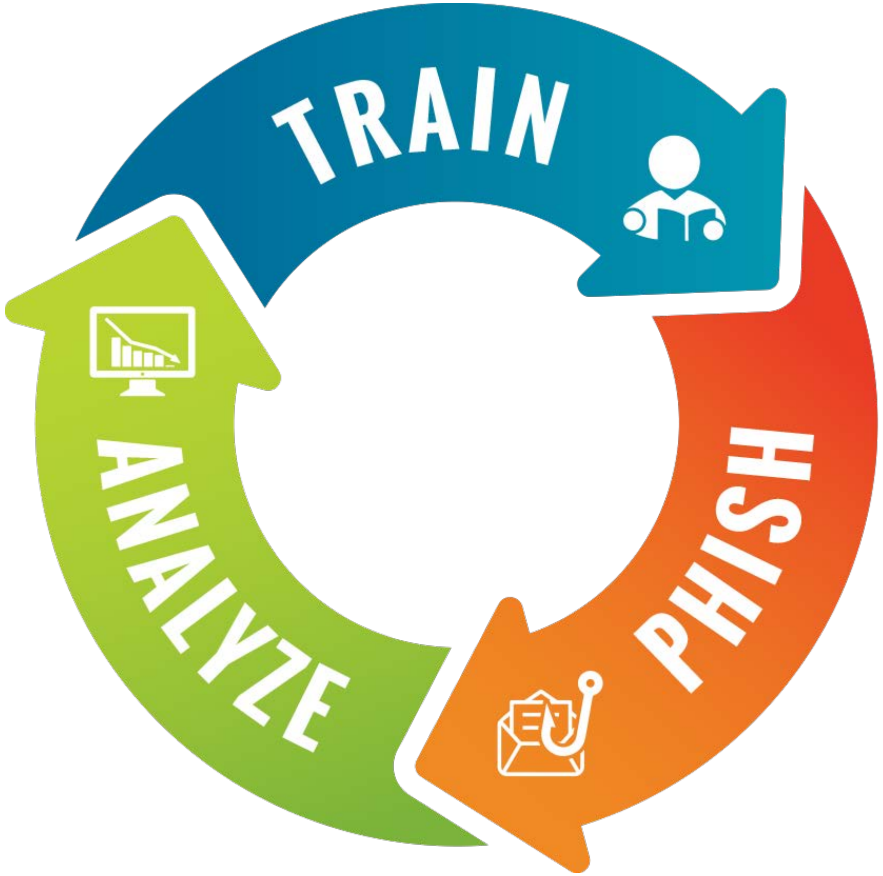
The world's largest library of security awareness training content; including interactive modules, videos, games, posters and newsletters. Automated training campaigns with scheduled reminder emails.

Phish Your Users

Best-in-class, fully automated simulated phishing attacks, hundreds of templates with unlimited usage, and community phishing templates.

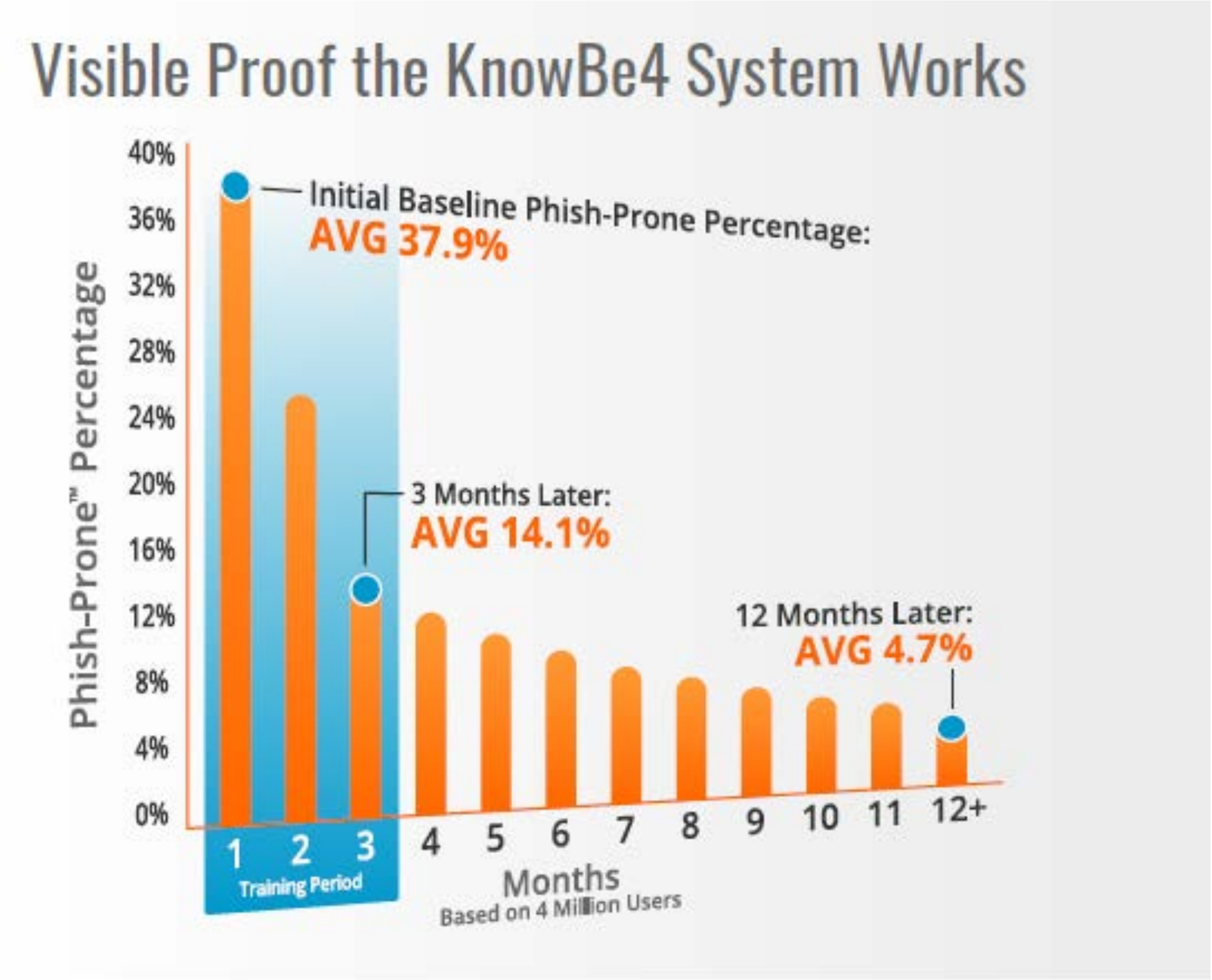
See the Results

Enterprise-strength reporting, showing stats and graphs for both training and phishing, ready for management. Show the great ROI!



Security Awareness Training Program That Works

- Drawn from a data set of **over six million users**
- Across **nearly 11K organizations**
- Segmented **by industry type** and **organization size**
- **241,762** Phishing Security Tests (PSTs)

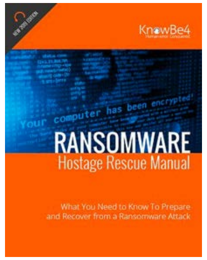


Resources

Free IT Security Tools

- Domain Doppelgänger
- Awareness Program Builder
- Domain Spoof Tool
- Mailserver Security Assessment
- Phish Alert
- Ransomware Simulator
- Weak Password Test
- Phishing Security Test
- Second Chance
- Email Exposure Check Pro
- Training Preview
- Breached Password Test

Whitepapers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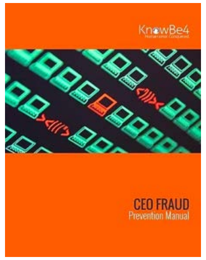
RANSOMWARE
Hostage Rescue Manual
What You Need to Know To Prepare and Recover from a Ransomware Attack

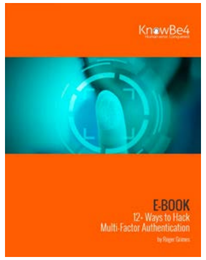
Ransomware Hostage Rescue Manual

Get the most complete Ransomware Manual packed with actionable info that you need to have to prevent infections, and what to do when you are hit with ransomware.



CEO Fraud Prevention Manual

CEO fraud is responsible for over $3 billion in losses. Don't be next. The CEO Fraud Prevention Manual provides a thorough overview of how executives are compromised, how to prevent such an attack and what to do if you become a victim.



12+ Ways to Hack Two-Factor Authentication

All multi-factor authentication (MFA) mechanisms can be compromised, and in some cases, it's as simple as sending a traditional phishing email. Want to know how to defend against MFA hacks? This whitepaper covers over a dozen different ways to hack various types of MFA and how to defend against those attacks.

» Learn More at www.KnowBe4.com/Resources «

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Know more about KnowBe4.

Contact: Rosa L. Smothers
(727) 748-4199
rosas@knowbe4.com

Thank You!

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