Security in a Transforming Digital World





Scott Klososky



Quotable

"The frequency of the attacks and the potential attack scenarios are becoming so dangerous that we can't wrap our brains around it."

Marina Krotofil, utility-control systems expert



TECHNOLOGIES



Global Rules in Flux

Fransparency Battles

Shifting Values & Valuables

Complexity at High Speed

ASIS Change Drivers: Mapping the Future













50 Years of Digital Transformation (2000 - 2050)

Augmentation Extortion/Control

MI Extortion/Corruption

Cybersecurity Risk Grows

Device Takeover

Social Engineering

Viruses

tions



Web

S



HUMALOGY® SCALE TOLL BOOTHS T1 T2 T3 T4 **H4** H3 H2 H1 0 **T5**

HUMAN INVOLVMENT

H5















HUMALOGY® SCALE TOLL BOOTHS H5 H4 H3 H2 H1 O T1 T2 T3 T4 **T5**

HUMAN INVOLVMENT





TECHNOLOGY INVOLVMENT TODAY





HUMALOGY® SCALE

H4 H5

HUMAN INVOLVMENT

So where is security on this scale?



H3 H2 H1 0 T1 T2 T3 **T4 T5**

TECHNOLOGY INVOLVMENT











Edge security is getting much more difficult with IoT devices, SCADA, cameras, controls, and smart equipment

Web 3.0 Future Connected Devices



IoT Security Threat Map



The Attack Surface continues to grow

This will force us to use **Machine Intelligence** to secure the perimeter



CYBER CRIMINALS

CYBER WARFARE

BANAN

INTERACTIONS

NEMOY



Defining Superpowers: A Massive Fork in the Road for Sec rity

Robotics: Physical & Virtual task handling



Sensing & Recognition: Sensors & Smart Devices

Self Learning Systems: Machine & Deep Learning



Software-Based Intelligence: AI, DSS







Defining Superpowers: A Massive Fork in the Road for Security

H4 H3 H2 H1 0 T1 T2 T3 **H5**



T4

TECHNOLOGY INVOLVMENT









Defining Superpowers: A Massive Fork in the Road for Security

H5

HUMAN **OLVMENT**

H4 H3 H2 H1 O T1 T2 T3 T4











Machine Intelligence



David Ferrucci, the developer of IBM Watson, was asked if the system can think... He answered, "Watson can think like a submarine can swim"





Machine Intelligence Ecosystem

Robotics (Fixed & Ambulatory) RPA (Robotic Process Automation) **Artificial Intelligence** Voice (NLP), Vision & Text Recognition Machine Learning **Deep Learning Recommendation Engines (DSS) Realtime Predictive Analytics Cognitive Computing**

ATRICORPS



Machine Intelligence Integration

Robotics + AI + NLP = Smart Machine Sentries

The combination of intelligent systems will create machines that can perform at levels far above humans



Machine Intelligence Integration

Robotics + AI + NLP = Smart Machine Sentries



AI + NLP + ML = Chatbots & Voice Assistants that oversee security

Vision Analytics + AI + ML = Intelligent surveillance & identification

Al + Deep Learning + Predictive Analytics = Smart systems that can predict attacks





Quote of the Day

"Educating doctors is going to take too long."

-Rogier Janssens, Beijing-based general manager of a biopharma company, on why China needs to embrace AI, robots, and smartphones in medicine. (Reuters)



We Desperately Need Machine Intelligence in Order to Advance





To take over jobs that are dangerous for people (i.e. physical security, violence response)

To take over making decisions that require access to large amounts of ever changing data (i.e. threat assessment)

To reconfigure security capabilities in real-time based on new attack vectors (i.e. cybersecurity defense)

To solve complex problems at faster speeds and with a higher rate of effectiveness (i.e. event management)

We Desperately Need Machine Intelligence in Order to Advance











With little in the way of **Digital Borders**, countries are struggling to balance openness with security, while pondering digital walls for nationalistic purposes





The scale of <u>Organized Digital Crime</u> is growing quickly and it is getting difficult to discern between criminals and state sponsored groups

Integrated Security is the only path for the industry because physical, electronic & Cyber security cannot defend future attacks on their own





$\Delta TRICORPS$

PHYSICAL SECURITY

Buildings, Guards, Gates and other physical measures in place to secure your assets. **The Physical Firewall**

ELECTRONIC SECURITY

Devices ranging from surveillance cameras to access control badges, biometric scanners, or facial recognition systems.

PHYSICAL SECURITY

ASSETS People + Data + Money + Intellectual Property

GOVERNANCE

GOVERNANCE

INTSEC MODEL (Integrated Security)

HUMANS

The lifeblood in and around your organization that supports the success of your mission, but also the first line of defense from any attack: **The Human Firewall**.

CYBERSECURITY

The systems you have in place to protect your electronic data and operational systems **The Network Firewall**.

GOVERNANCE

The policies and rules set in place which support ongoing excellent security processes that keep your assets protected.

CYBERSECURITY

ELECTRONIC SECURITY









In the end, there will only be:

- Risk Analysis
- Security

 $\Delta TRICORPS$

- Event Management





AN INTEGRATED SECURITY MODEL

ALIGN the Security Strategy

with the Risk Strategy







AN INTEGRATED SECURITY MODEL







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Like it or not, technology has become the jugular vein of your business Mike Foster



