Tony Scott

CIO VMware (2013-2015)
CIO Microsoft (2008 – 2013)
CIO The Walt Disney Company (2005-2008)
CTO General Motors (2009-2005)
Security by Design in A Borderless World

Changing the Way we do Cybersecurity
My Journey....
A bad day at work.....
Just a little trip down an information systems memory lane....
The Internet of Things
Transformative Opportunities

- Relentless Digitization
- Security and Privacy by Design
- Machine Learning / AI
- 5G Wireless Networks
Relentless Digitization
Traditional Analog Business Model
Digital Business Reality
Age Old IT Dilemma

Buy or Build?
New Model Emerging – Config to Order
Configure to Order for Enterprise Agility
Software Defined Everything

It appears you're trying to understand software defined networking. Would you like me to help you?
Why does Security & Privacy matter in the design process?
Answer: Because it is hard and expensive to do after the fact
Security After the Fact, or Secure by Design?

1965 Mustang

2017 Mustang

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Security & Privacy by Design

- Component Provenance (Hardware and Software)
- Context & Data Aware Infrastructure
- Transparent & Externally Inspectable operations
- Self Health Check built in
- Self Healing
- Performant and Scalable
- Modern Identity and Access Management enabled
- Resilient (end-to-end)
<table>
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<tr>
<th>Takeaways – Security and Privacy By Design</th>
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<tr>
<td>Replacing Legacy systems presents the biggest opportunity for reducing risk and saving money</td>
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<td>Data and IP (intellectual property) are the most high value non-human assets of the Enterprise</td>
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<td>Enterprise trustworthiness is a core Consumer/Citizen Issue for any “Brand”</td>
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<td>Redefinition of “Privacy” is required to meet modern reality</td>
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<td>Citizens / Customer Digital “rights” and data ownership regulations on the rise globally - GDPR</td>
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Machine Learning
Artificial Intelligence
A program that can sense, reason, act, and adapt

Machine Learning
Algorithms whose performance improve as they are exposed to more data over time

Deep Learning
Subset of machine learning in which multilayered neural networks learn from vast amounts of data

Artificial Intelligence
Any technique which enables computers to mimic human behavior.

Machine Learning
Subset of AI techniques which use statistical methods to enable machines to improve with experiences.

Deep Learning
Subset of ML which make the computation of multi-layer neural networks feasible.
Takeaways – Machine Learning & AI

- Will be a de facto part of every consumer interaction
- Key Element in Cybersecurity Strategy
- Training data and models – new & emerging Digital Supply Chain Opportunity
- Different Technology approaches by the Big Four (Google, Microsoft, Amazon, IBM)
5G Wireless Networks
5G Networks

- 10,000 x more traffic
- 10-100 x more devices
- 1 millisecond latency
- 10 years battery for M2M
- M2M ultra low cost
- 10 Gbit/s data rates
- 100 Mbit/s low-end data rates
- Ultra reliability

Key features:
- Capacity
- Latency
- Energy consumption
- Physical limits
- Cost
- User data rates
- Coverage
Takeaways – 5G Wireless Networks

- $12 trillion market value opportunity
- Key enabler for IOT generally
- VR and AR become mainstream interface for mobile
- Healthcare is biggest single opportunity
Final Thoughts

• Leadership will have to understand:
  • The Strategic Opportunities presented by technology
  • The Risk associated with underinvestment in the right tech
  • The Need for Tech talent in the Executive team

• Speed and Agility is the new Growth Strategy

• War for Talent will continue to intensify
Thank You!

tony.scott@tonyscottgroup.com